



China and Proliferation of Weapons of Mass Destruction and Missiles: Policy Issues

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Summary

Congress has long been concerned about whether U.S. policy advances the national interest in reducing the role of the People's Republic of China (PRC) in the proliferation of weapons of mass destruction (WMD) and missiles that could deliver them. Recipients of China's technology reportedly include Pakistan and countries said by the State Department to have supported terrorism, such as Iran. This CRS Report, updated as warranted, discusses the security problem of China's role in weapons proliferation and issues related to the U.S. policy response since the mid-1990s. China has taken some steps to mollify U.S. and other foreign concerns about its role in weapons proliferation. Nonetheless, supplies from China have aggravated trends that result in ambiguous technical aid, more indigenous capabilities, longer-range missiles, and secondary (retransferred) proliferation. According to unclassified intelligence reports submitted as required to Congress, China has been a "key supplier" of technology, particularly PRC entities providing nuclear and missile-related technology to Pakistan and missile-related technology to Iran.

Policy approaches in seeking PRC cooperation have concerned summits, sanctions, and satellite exports. On November 21, 2000, the Clinton Administration agreed to waive missile proliferation sanctions, resume processing licenses to export satellites to China, and discuss an extension of the bilateral space launch agreement, in return for another PRC promise on missile nonproliferation. However, PRC proliferation activities have continued to raise questions about China's commitment to nonproliferation and the need for U.S. sanctions. The Bush Administration imposed sanctions on 20 occasions on various PRC "entities" (including state-owned entities) for troublesome transfers related to missiles and chemical weapons to Pakistan, Iran, or perhaps another country, including repeated sanctions on some "serial proliferators." Among those sanctions, in September 2001, the Administration imposed missile proliferation sanctions that effectively denied satellite exports, after a PRC company transferred technology to Pakistan, despite the promise of 2000. In September 2003, the State Department imposed additional sanctions on NORINCO, a defense industrial entity, effectively denying satellite exports to China. However, for six times, the State Department waived this sanction for the ban on imports of other PRC government products related to missiles, space systems, electronics, and military aircraft, and issued a permanent waiver in 2007. Since 2009, the Obama Administration has imposed sanctions on four occasions on PRC entities for missile or other weapon proliferation.

Skeptics question whether China's cooperation in weapons nonproliferation warrants the U.S. pursuit of closer ties, even as sanctions were required against PRC technology transfers. Some criticize the imposition of U.S. sanctions targeting PRC "entities" but not the government. Others doubt the effectiveness of any stress on sanctions over diplomacy. Meanwhile, in 2002-2008, the U.S. approach relied on China's influence on North Korea to dismantle its nuclear weapons. Beijing hosted the "Six-Party Talks" (last held in December 2008) with limited results. China's approach evolved to vote for some U.N. Security Council (UNSC) sanctions against nuclear proliferation in North Korea and Iran. Some still called for engaging more with Beijing to use its leverage against Pyongyang and Tehran. However, North Korea's second nuclear test in 2009 and military attacks against South Korea in 2010 prompted greater debate about the value of China's roles. After much diplomacy, the PRC voted in June 2009 for UNSC Resolution 1874 to expand sanctions previously imposed under Resolution 1718 in 2006 against North Korea and voted in June 2010 for UNSC Resolution 1929 for the fourth set of sanctions against Iran. Also, concerns increased that China could capitalize in oil/gas deals in Iran as others enforce sanctions. Relevant legislation for Congressional oversight include U.S. sanctions against Iran (**P.L. 111-195**) and the FY2011 National Defense Authorization Act (**P.L. 111-383**) relating to nuclear security.

Contents

Purpose and Scope	1
PRC Proliferation Challenges	1
Partial Nonproliferation Commitments	1
Continuing Concerns and Intelligence Report	2
Nuclear Technology Sales to Pakistan	3
Overview	3
Ring Magnets and Another Pledge	3
Other Nuclear Cooperation	4
A. Q. Khan's Nuclear Network	6
Missile Technology Sales to Pakistan	7
Overview	7
M-11 Missiles and Another Pledge	7
Missile Plants and MRBMs	8
Nuclear Technology Sales to Iran	9
Overview and Policy Approaches	9
Canceled Nuclear Projects	10
1997 Promise	11
Uranium Enrichment	11
Dual Approach and Energy-related Oil and Gas Deals	13
UNSC Resolutions and Sanctions	15
Missile Technology Sales to Iran	19
Overview	19
Clinton Administration	20
Bush Administration	20
Obama Administration	22
Chemical Sales to Iran	22
North Korea's Missile and Nuclear Weapons Programs	24
Suspected Missile Supplies	24
Secret Nuclear Programs	25
PRC Ports and Airspace	26
Military Relationship	27
Trilateral and Six-Party Talks in Beijing	29
Missile Technology Sales to Libya	52
Missile Technology Sales to Syria	52
Missile Technology Sales to Iraq	52
Policy Issues and Options	53
Issues for Policy	53
Debate	53
The PRC Government's Role	54
Foreign and Defense Policies	54
Summits	54
Counter-Terrorism Campaign	55
Missile Defense	56
Proliferation Security Initiative and 9/11 Commission	56
Export Control Assistance	57
Linkage to the Taiwan Question	57

Economic Controls.....	57
Satellite Exports.....	57
Sanctions and the “Helms Amendment”	58
Capital Markets.....	61
Nuclear Cooperation and U.S. Export of Reactors	61
U.S. Import Controls	62
U.S. Export Controls	62
Nonproliferation and Arms Control	62
Nonproliferation Regimes (MTCR, NSG, etc.)	62
CTBT, Fissile Materials, and Nuclear Security	64
Intermediate-range Nuclear Forces (INF) Treaty.....	64
International Lending	65

Tables

Table 1. PRC Entities Sanctioned for Weapons Proliferation.....	66
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Contacts

Author Contact Information	73
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Purpose and Scope

Congress has long been concerned about whether U.S. policy advances U.S. security interests in reducing the role of the People's Republic of China (PRC) in the proliferation of weapons of mass destruction (WMD) and missiles as well as obtaining China's cooperation in weapons nonproliferation. This problem refers to the threat of nuclear, chemical, or biological weapons and missiles that could deliver them. Some have argued that certain PRC transfers violated international treaties or guidelines, and/or have contravened various U.S. laws requiring sanctions to shore up those international standards. Even if no laws or treaties are violated, many view China's transfers as threatening U.S. security interests. Using unclassified consultations and citations, this CRS Report discusses the national security problem of the PRC's role in weapons proliferation and issues related to the U.S. policy response, including legislation, since the mid-1990s. **Table 1**, at the end of this report, summarizes the U.S. sanctions imposed or waived on PRC entities or the PRC government for weapons proliferation. For a discussion of the policy problem in the 1980s to 1996, see CRS Report 96-767, *Chinese Proliferation of Weapons of Mass Destruction: Background and Analysis*, by Shirley A. Kan. See also, by the same author, CRS Report 98-485, *China: Possible Missile Technology Transfers Under U.S. Satellite Export Policy—Actions and Chronology*.

PRC Proliferation Challenges

Partial Nonproliferation Commitments

Since 1991, Beijing has taken steps to address U.S. and other countries' concerns by increasing its partial participation in international nonproliferation regimes and issuing export control regulations. However, questions have remained. China first promised tentatively to abide by the Missile Technology Control Regime (MTCR) in November 1991 and February 1992 and later reaffirmed that commitment in an October 4, 1994, joint statement with the United States. The MTCR, set up in 1987, is not an international agreement and has no legal authority, leaving issues about U.S. sanctions to shore up the standards unresolved. It is a set of voluntary guidelines that seeks to control the transfer of ballistic and cruise missiles that are inherently capable of delivering at least a 500 kg (1,100 lb) payload to at least 300 km (186 mi), called "Category I" or "MTCR-class" missiles. It was unclear whether China adhered to the revised MTCR guidelines of 1993 calling for the presumption to deny transfers of *any* missiles capable of delivering *any* WMD (not just nuclear weapons). A 1996 State Department fact sheet said that China unilaterally committed to controlling exports "consistent with the MTCR Guidelines and Annex," with the MTCR consisting of a common export control policy (*Guidelines*) applied to a common list of controlled items (*Annex*). However, a Senate Foreign Relations Committee report of September 11, 2000, said the State Department had argued to Congress that China agreed to the MTCR Guidelines, but not the Annex.

On November 21, 2000, Beijing said that it has no intention of assisting any other country in developing ballistic missiles that can be used to deliver nuclear weapons (missiles with payloads of at least 500 kg and ranges of at least 300 km) and promised to issue missile-related export controls "as soon as possible." After a contentious period that saw new U.S. sanctions, the PRC finally published those regulations and the control list (modeled on the MTCR) on August 25,

2002, as Washington and Beijing prepared for a Bush-Jiang summit on October 25, 2002. In 2004, China applied to join the MTCR but has not been accepted as a member.

China acceded to the Nuclear Nonproliferation Treaty (NPT) on March 9, 1992. The NPT does not ban peaceful nuclear projects. On May 11, 1996, the PRC issued a statement promising to make only safeguarded nuclear transfers. China, on July 30, 1996, began a moratorium on nuclear testing and signed the Comprehensive Test Ban Treaty (CTBT) in September 1996 but (like the United States) has not ratified it. Premier Li Peng issued nuclear export control regulations on September 10, 1997. On October 16, 1997, China joined the Zangger Committee (on nuclear trade). Also in October 1997, China promised not to start new nuclear cooperation with Iran. On June 6, 1998, the U.N. Security Council (including China) adopted Resolution 1172, asking states to prevent exports to India or Pakistan's nuclear weapon or missile programs. The PRC issued regulations on dual-use nuclear exports on June 17, 1998. In May 2004, China applied to join the Nuclear Suppliers Group (NSG), which accepted China as a member after the Bush Administration decided to support China, despite congressional concerns.

In 1995, China issued its first public defense white paper, which focused on arms control and disarmament. Also, China signed the Chemical Weapons Convention (CWC) in January 1993. On April 25, 1997, China deposited its instrument of ratification of the CWC, before it entered into force on April 29, 1997. From 1993 to 1998, the PRC issued export control regulations on chemicals. On October 14, 2002, on the eve of a Bush-Jiang summit, the PRC issued regulations for export controls over dual-use biological agents and related technology. On December 3, 2003, China issued a white paper on nonproliferation, which stated that its control lists are almost the same as those of the Zangger Committee, NSG, CWC, Australia Group, and MTCR.

Continuing Concerns and Intelligence Report

Nevertheless, China is not a member of the MTCR or the Australia Group (AG) (on chemical and biological weapons). (In June 2004, China expressed willingness to join the MTCR.) China did not join the 93 countries in signing the International Code of Conduct Against Ballistic Missile Proliferation in The Hague on November 25, 2002. China has not joined the Proliferation Security Initiative (PSI) announced by President Bush on May 31, 2003. PRC weapons proliferation has persisted, aggravating trends that result in more ambiguous technical assistance (vs. transfers of hardware), longer range missiles, more indigenous capabilities, and secondary (i.e., retransferred) proliferation.

The Director of Central Intelligence (DCI) noted that, for July-December 1996, "China was the most significant supplier of WMD-related goods and technology to foreign countries." As required by Section 721 of the FY1997 Intelligence Authorization Act, P.L. 104-293, the intelligence community's report to Congress, "Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions," has named "entities" in China (plus North Korea and Russia) as "**key suppliers**" of dangerous technology that could contribute to WMD and missile programs. China's "entities," including state-owned defense industrial corporations, have been "associated" with Pakistan's nuclear and missile programs and Iran's missile programs. Subsequent discussions of this required report refer to this "**Section 721 Report.**" Original legislation required a semi-annual report. The FY2004 Intelligence Authorization Act (P.L. 108-177) changed the requirement to an annual report. The Deputy Director of National Intelligence for Analysis submitted to Congress the latest unclassified Section 721 Report to cover the year of 2009.

Nuclear Technology Sales to Pakistan

Overview

In 1996, U.S. policymakers faced the issue of whether to impose sanctions on the PRC for technology transfers to Pakistan's nuclear program, and Beijing issued another nuclear nonproliferation pledge. Since then, the United States has maintained concerns—but at a lower level—about continued PRC nuclear cooperation with Pakistan, particularly involving the construction of nuclear power plants at Chashma. The PRC government is believed to know about some, if not all, of the ongoing nuclear cooperation with Pakistan. Nonetheless, in 2004, the Bush Administration supported China's application to join the Nuclear Suppliers Group (NSG), despite Congressional concerns about China's failure to apply the NSG's "full-scope safeguards" to its nuclear projects in Pakistan. (Full-scope safeguards apply IAEA inspections to all other declared nuclear facilities in addition to the facility importing supplies in order to prevent diversions to any weapon programs.)

Ring Magnets and Another Pledge

In 1996, some in Congress called for sanctions after reports disclosed that China sold unsafeguarded ring magnets to Pakistan, apparently in violation of the NPT and in contradiction of U.S. laws, including the Arms Export Control Act (P.L. 90-629) and Export-Import Bank Act (P.L. 79-173), as amended by the Nuclear Proliferation Prevention Act of 1994 (Title VIII of P.L. 103-236). On February 5, 1996, the *Washington Times* disclosed intelligence reports that the China National Nuclear Corporation, a state-owned corporation, transferred to the A.Q. Khan Research Laboratory in Kahuta, Pakistan, 5,000 ring magnets that can be used in gas centrifuges to enrich uranium. Reportedly, intelligence experts believed that the magnets provided to Pakistan were to be used in special suspension bearings at the top of rotating cylinders in the centrifuges. The *New York Times*, on May 12, 1996, reported that the shipment was made after June 1994 and was worth \$70,000. The PRC company involved was China Nuclear Energy Industry Corporation, a subsidiary of the China National Nuclear Corporation. The State Department's report on nonproliferation efforts in South Asia (issued on January 21, 1997) confirmed that "between late 1994 and mid-1995, a Chinese entity transferred a large number of ring magnets to Pakistan for use in its uranium enrichment program."

The Clinton Administration's decision-making was complicated by considerations of U.S. corporations doing business in China. Officials reportedly considered imposing then waiving sanctions or focusing sanctions only on the China National Nuclear Corporation, rather than large-scale sanctions affecting the entire PRC government and U.S. companies, such as Westinghouse Electric Corporation (which had deals pending with China National Nuclear Corporation) and Boeing Aircraft Company. In February 1996, Secretary of State Warren Christopher instructed the Export-Import Bank to suspend financing for commercial deals in China for one month, reported the *New York Times* (February 29, 1996). Christopher reportedly required time to obtain more information to determine whether sanctions would be required. Meanwhile, DCI John Deutch reportedly said at a White House meeting that PRC officials at some level likely approved the sale of magnets. Defense Secretary William Perry supported this view, but officials of the Commerce and Treasury Departments and the U.S. Trade Representative argued there was lack of solid proof, according to the *Washington Post* (April 1, 1996).

On May 10, 1996, the State Department announced that China and Pakistan would not be sanctioned, citing a new agreement with China. Clinton Administration officials said that China promised to provide future assistance only to safeguarded nuclear facilities, reaffirmed its commitment to nuclear nonproliferation, and agreed to consultations on export control and proliferation issues. The Administration also said that PRC leaders insisted they were not aware of the magnet transfer and that there was no evidence that the PRC government had willfully aided or abetted Pakistan's nuclear weapon program through the magnet transfer. Thus, the State Department announced that sanctions were not warranted, and Export-Import Bank considerations of loans for U.S. exporters to China were returned to normal. On May 11, 1996, China's foreign ministry issued a statement that "China will not provide assistance to unsafeguarded nuclear facilities." In any case, since 1984, China has declared a policy of nuclear nonproliferation and a requirement for recipients of its transfers to accept IAEA safeguards, and China acceded to the NPT in 1992.

That year, Congress responded to the Administration's determination not to impose sanctions by adding language on "persons" in the Export-Import Bank Act, as amended by Section 1303 of the National Defense Authorization Act for FY1997 (P.L. 104-201), enacted on September 23, 1996.

Other Nuclear Cooperation

On October 9, 1996, the *Washington Times* reported that a CIA report dated September 14, 1996, said that China sold a "special industrial furnace" and "high-tech diagnostic equipment" to unsafeguarded nuclear facilities in Pakistan. In September 1996, PRC technicians in Pakistan reportedly prepared to install the dual-use equipment. The deal was allegedly made by the China Nuclear Energy Industry Corporation, the same firm which sold the ring magnets. Those who suspected that the transfer was intended for Pakistan's nuclear weapons program said that high temperature furnaces are used to mold uranium or plutonium. The CIA report was said to state that "senior-level government approval probably was needed" and that PRC officials planned to submit false documentation on the final destination of the equipment. According to the press, the CIA report said that the equipment was set to arrive in early September 1996. The *Washington Post*, on October 10, 1996, further reported that the equipment was intended for a nuclear reactor to be completed by 1998 at Khushab in Pakistan. On October 9, 1996, the State Department said that it had not concluded that China violated its promise of May 11, 1996. However, the State Department did not publicly address whether the suspected transfers occurred before May 11, 1996, violated the NPT, or contradicted U.S. laws (including the Arms Export Control Act, Export-Import Bank Act, and the Nuclear Proliferation Prevention Act).

Concerns have persisted about PRC assistance to Pakistan's nuclear facilities. As reported by Pakistani and PRC news sources in 1992, China began to build a nuclear power plant at Chashma and was suspected in 1994 of helping Pakistan to build an unsafeguarded, plutonium-producing reactor at Khushab, according to *Nucleonics Week* (June 19, 1997, and February 26, 1998). Operational since 2001, the Chashma reactor has IAEA safeguards but not full scope safeguards (*Nucleonics Week*, April 26, 2001; and IAEA, *Annual Report 2001*).

Referring specifically to Pakistan's efforts to acquire equipment, materials, and technology for its nuclear weapons program, the DCI's June 1997 "Section 721 report" for the last half of 1996 (after China's May 1996 pledge) stated that China was the "principal supplier." Then, on May 11 and 13, 1998, India conducted nuclear tests, citing China's nuclear ties to Pakistan, and Pakistan followed with nuclear tests on May 28 and 30, 1998. China, as Pakistan's principal military and nuclear supplier, failed to avert the tests and did not cut off nuclear aid, but condemned the tests

at the U.N. The Arms Control and Disarmament Agency's annual report on arms control for 1998 stated that "there continued to be some contacts between Chinese entities and Pakistan's unsafeguarded and nuclear weapons program."

In 2000, news reports said that some former U.S. nonproliferation and intelligence officials suspected that China provided equipment for Pakistan's secret heavy water production plant at Khushab, where an unsafeguarded reactor reportedly started up in April 1998 and generated weapons-grade plutonium. Clinton Administration officials at the White House and State Department reportedly denied China's involvement but said that they did not know the origins of the plant.¹ The DCI reported in November 2003 that, in the first half of 2003, continued contacts between PRC entities and "entities associated with Pakistan's nuclear weapons program" cannot be ruled out, despite the PRC's 1996 promise not to assist unsafeguarded nuclear facilities. The Director of the Defense Intelligence Agency (DIA), Vice Admiral Lowell Jacoby, testified to the Senate Intelligence Committee on February 24, 2004, that PRC entities "remain involved with nuclear and missile programs in Pakistan and Iran," while "in some cases," the entities were involved without the government's knowledge, thus implying that there were cases in which the PRC government had knowledge of the relationships.

On May 5, 2004, China signed a contract to build a second nuclear power reactor (**Chashma-2**) in Pakistan. This contract raised questions because of continuing PRC nuclear cooperation with Pakistan and its signing right before a decision by the Nuclear Suppliers Group (NSG) on China's membership, applied with U.S. support. With a pre-existing contract, Chashma-2 was exempted from the NSG's requirement for full-scope safeguards (not just IAEA safeguards on the reactor).² (See "Nonproliferation Regimes (MTCR, NSG, etc.," below for policy discussion.) After China's grandfathering of the Chashma-2 reactor under a pre-existing contract, the United States and other countries monitored China's subsequent agreement in October 2008 to build two more nuclear reactors in Pakistan for compliance with the NSG's rules, unless there is an exemption (like that for India in 2008). In February 2010, China and Pakistan signed an agreement to finance the construction of the two more reactors, Chashma-3 and Chashma-4, and the next month, Pakistan's government approved the deal in which the PRC promised a loan for the projects. In June, PRC companies signed the contract to build the reactors.³ The PRC acknowledged the deal and contended that the reactors would be subject to IAEA safeguards. However, Assistant Secretary of State for South and Central Asian Affairs Robert Blake said in Beijing on May 4 that China's deal would require it to seek an exception to the NSG's guidelines. Acting Assistant Secretary of State for International Security and Nonproliferation Vann Van Diepen testified that the Administration decided to vote against an exemption for China, at a hearing on July 22 of the House Foreign Affairs Subcommittee on Terrorism, Nonproliferation, and Trade. On September 21, the PRC Foreign Ministry claimed that the 3rd and 4th reactors were "based on" the PRC-Pakistan agreement signed in 2003 and that China requested IAEA safeguards. In November, China indicated that it planned to build a fifth nuclear reactor in Pakistan. Meanwhile, on December 21, 2010, PPG Paints Trading Company in Shanghai pled guilty in a U.S. court to illegally exporting high-performance coatings from the United States through the PRC to the Chashma-2 reactor in Pakistan from June 2006 to March 2007.

¹ Mark Hibbs, "CIA Knew About Khushab D2O Plant but Not Source, Officials Claim," *Nucleonics Week*, March 23, 2000; "Pakistani Separation Plant Now Producing 8-10 Kg Plutonium/Yr," *Nuclear Fuel*, June 12, 2000.

² "Pakistan, China Agree on Second Chashma Unit," *Nucleonics Week*, May 6, 2004.

³ *Daily Times*, Lahore, October 19; *Nucleonics Week*, October 23; *Jane's Defense Weekly*, October 29, 2008; *Daily Times*, Lahore, March 30, 2010; *Financial Times*, April 29, 2010; *Reuters*, June 24, 2010.

A. Q. Khan's Nuclear Network

China's past and persisting connections to Pakistan's nuclear program raised questions about whether China was involved in or had knowledge about the long-time efforts, publicly confirmed in early 2004, of Abdul Qadeer Khan, the former head of Pakistan's nuclear weapon program, in selling uranium enrichment technology to Iran, North Korea, and Libya. DCI George Tenet confirmed A.Q. Khan's network of nuclear trade in open testimony to the Senate Intelligence Committee on February 24, 2004.

China's ties to the network was a concern, particularly because China was an early recipient of the uranium enrichment technology using centrifuges that Khan had acquired in Europe. In return, in 1982, China gave Pakistan 15 tons of uranium hexafluoride gas for production of bomb-grade uranium, 50 kilograms of weapons-grade enriched uranium enough for two bombs, and a blue-print for a nuclear weapon that China already tested, according to Khan.⁴

Also, there were questions about whether China shared intelligence with the United States about Khan's nuclear technology transfers. With the troubling disclosures, China could have been more willing to cooperate on nonproliferation or could have been reluctant to confirm its involvement. A senior Pakistani diplomat was quoted as saying that, while in Beijing in 2002, PRC officials said they knew "A.Q. Khan was in China and bribing people, and they wanted him out."⁵ Particularly troubling was the reported intelligence finding in early 2004 that Khan sold Libya a nuclear bomb design that he received from China in the early 1980s (in return for giving China his centrifuge technology), a design that China had already tested in 1966 and had developed as a compact nuclear bomb for delivery on a missile.⁶ That finding raised the additional question of whether Khan also sold that bomb design to others, including Iran and North Korea. According to two former U.S. nuclear bomb designers, the PRC proliferated nuclear bomb technology to Pakistan, including a test conducted in 1990 for Pakistan of its first nuclear bomb.⁷ DCI Porter Goss testified in February 2005 that the Bush Administration continued to explore opportunities to learn about Khan's nuclear trade, adding that "getting to the end of that trail is extremely important for us. It is a serious proliferation question."⁸ In his memoir of 2007, George Tenet wrote that Khan's broad international network included China, North Korea, and vaguely "the Muslim world."⁹ Finally, on January 12, 2009, the State Department imposed sanctions on 13 people and three companies for involvement in A.Q. Khan's network that proliferated nuclear technology to Iran, Libya, and North Korea. But the State Department did not name China among a number of countries that cooperated to investigate and shut down that proliferation network.

⁴ David Sanger and William Broad, "From Rogue Nuclear Programs, Web of Trails Leads to Pakistan," *New York Times*, January 4, 2004; Simon Henderson, "Investigation: Nuclear Scandal, Dr Abdul Qadeer Khan," *Sunday Times*, London, September 20, 2009; R. Jeffrey Smith and Joby Warrick, "A Nuclear Power's Act of Proliferation," *Washington Post*, November 13, 2009.

⁵ Barton Gellman and Dafna Linzer, "Unprecedented Peril Forces Tough Calls," *Washington Post*, October 26, 2004.

⁶ Joby Warrick and Peter Slevin, "Libyan Arms Designs Traced Back to China," *Washington Post*, February 15, 2004; William Broad and David Sanger, "As Nuclear Secrets Emerge in Khan Inquiry, More Are Suspected," *New York Times*, December 26, 2004.

⁷ Thomas Reed, "The Chinese Nuclear Tests, 1964-1996," *Physics Today*, September 2008; Alex Kingsbury, "Why China Helped Countries Like Pakistan, North Korea Build Bombs," *U.S. News & World Report*, January 5, 2009.

⁸ Senate Select Committee on Intelligence, hearing on "Global Intelligence Challenges 2005: Meeting Long-term Challenges with a Long-term Strategy," February 16, 2005.

⁹ George Tenet, *At the Center of the Storm: My Years at the CIA* (Harper Collins Publishers, 2007).

Missile Technology Sales to Pakistan

Overview

From the early 1990s to 2000, the George H.W. Bush and Clinton Administrations faced the issue of whether to impose sanctions on PRC “entities” for transferring M-11 short-range ballistic missiles or related technology to Pakistan. The Clinton Administration took eight years to determine in 2000 that PRC entities had transferred complete M-11 missiles as well as technology to Pakistan, but waived sanctions in return for another missile nonproliferation pledge from Beijing. However, despite that promise of November 2000, the United States has continued concerns about PRC technology transfers that have helped Pakistan to build domestic missile programs, including development of medium-range ballistic missiles. In September 2001, the George W. Bush Administration imposed sanctions for PRC proliferation of missile technology to Pakistan, denying satellite exports to China.

M-11 Missiles and Another Pledge

Transfers of the PRC’s M-11 short range ballistic missiles (SRBMs) or related equipment exceed MTCR guidelines, because the M-11 has the inherent capability to deliver a 500 kg (1,100 lb) warhead to 300 km (186 mi). Issues about U.S. sanctions have included the questions of whether PRC transfers to Pakistan involved M-11 missile-related technology (Category II of the MTCR) or complete missiles (Category I). Sanctions for missile-related transfers are mandated under Section 73(a) of the Arms Export Control Act (AECA) and Section 11B(b)(1) of the Export Administration Act (EAA) (as amended by the FY1991 National Defense Authorization Act).

In June 1991, the Bush Administration first imposed sanctions on entities in China for transferring M-11 technology to Pakistan. Sanctions affected exports of supercomputers, satellites, and missile technology. The Administration later waived the sanctions on March 23, 1992. On August 24, 1993, the Clinton Administration determined that China had again transferred M-11 equipment (not whole missiles) to Pakistan and imposed new sanctions (affecting exports of some satellites). On October 4, 1994, Secretary of State Warren Christopher and Foreign Minister Qian Qichen signed a joint statement, saying that Washington would waive the August 1993 sanctions and Beijing would not export “ground-to-ground missiles” “inherently capable” of delivering a 500 kg warhead 300 km. The Administration waived the sanctions on November 1, 1994.

However, contentious policy questions about imposing sanctions for the 1992 transfer of complete M-11 SRBMs (not just components) persisted until 2000. The *Washington Times* (March 14, 1997) said “numerous” intelligence reports indicated that M-11 missiles were “operational” in Pakistan, but these findings were disputed by some policymakers. Secretary of Defense William Cohen issued a Pentagon report in 1997 stating that Pakistan acquired “SRBMs” as well as related equipment from China in the early 1990s.¹⁰ In a 1998 report to Congress on nuclear nonproliferation in South Asia, the State Department acknowledged its concerns about “reports that M-11 missiles were transferred from China to Pakistan” but added that it had not determined that such transfers occurred, “which would be sanctionable under U.S. law.”¹¹ Gordon

¹⁰ Office of the Secretary of Defense, *Proliferation: Threat and Response*, November 1997.

¹¹ Department of State, “Report on Nuclear Nonproliferation in South Asia,” March 17, 1998.

Oehler, former head of the CIA's Nonproliferation Center, testified on June 11, 1998, to the Senate Foreign Relations Committee that in November 1992, "the Chinese delivered 34 M-11s to Pakistan." In July 1998, the Rumsfeld Commission said that China had transferred complete M-11s to Pakistan.¹²

Some said that sanctions were not imposed for transfers of complete M-11s, because the missiles remained inside crates at Sagodha Air Base, according to the *Wall Street Journal* (December 15, 1998). Critics in Congress said the Clinton Administration avoided making determinations of whether to impose sanctions, by delaying tactics, re-writing reports, and setting high evidentiary standards. The Senate Foreign Relations Committee issued a report in September 2000, saying that the Administration avoided such determinations by the use of "bureaucratic maneuvers" to delay the drafting of "Statements/Findings of Fact" by the intelligence community and by not scheduling interagency meetings to consider those findings.¹³

On September 9, 1999, the intelligence community publicly confirmed for the first time that "Pakistan has M-11 SRBMs from China" and that they may have a nuclear role.¹⁴ However, the State Department argued on September 14, 1999, that it required a "high standard of evidence" and had not yet determined that Category I sanctions were warranted, despite the intelligence judgment. (Category I sanctions would deny licenses for exports of Munitions List items, among other actions, and Congress transferred satellites back to the Munitions List, effective March 15, 1999.) The *Far Eastern Economic Review* reported on May 18, 2000, that the Clinton Administration and Senator Helms of the Foreign Relations Committee struck a deal in 1999 that required a decision on sanctions for the PRC's M-11 transfer to Pakistan in exchange for the confirmation of Robert Einhorn as Assistant Secretary of State for Nonproliferation (approved on November 3, 1999). On November 21, 2000, the Clinton Administration said it determined that PRC entities had transferred Category I and Category II missile-related items to Pakistani entities, and sanctions would be waived on the PRC for past transfers, given its new missile nonproliferation promise.

Missile Plants and MRBMs

While China promised not to transfer *missiles*, it has reportedly helped Pakistan to achieve an indigenous missile capability. U.S. intelligence reportedly concluded in a National Intelligence Estimate that China provided blueprints and equipment to Pakistan to build a plant for making missiles that would violate the MTCR, according to the *Washington Post* (August 25, 1996). Analysts disagreed, however, about whether the plant would manufacture some major missile components or whole copies of the M-11 missile. Construction of the plant allegedly began in 1995. On August 25, 1996, Vice President Al Gore acknowledged concerns about the plant. *Time* reported on June 30, 1997, that the Clinton Administration would not discuss possible sanctions based on intelligence on the missile plant. The November 1997 report of the Secretary of Defense also confirmed Pakistan's facility "for the production of a 300 kilometer range ballistic missile."

¹² Commission to Assess the Ballistic Missile Threat to the United States (popularly known as the Rumsfeld Commission), report, July 15, 1998.

¹³ Senate Foreign Relations Committee, "Chairman's Overview of China's Proliferation Track Record," September 11, 2000.

¹⁴ National Intelligence Council, "Foreign Missile Developments and the Ballistic Missile Threat to the United States Through 2015," September 1999.

By 1998, the missile plant in Fatehjung was almost finished, awaiting delivery of crucial equipment from China, reported the *Wall Street Journal* (December 15, 1998).

On April 6, 1998, Pakistan first tested its nuclear-capable Ghauri (Hatf-5) medium-range ballistic missile (MRBM), which is based on the North Korean No Dong missile. U.S. intelligence was said to suspect that China Poly Ventures Company delivered, perhaps in 1999, U.S.-made specialized metal-working presses and a special furnace to Pakistan's National Development Center, a missile plant, reported the *Washington Times* (April 15, 1999). China reportedly was building a second missile plant and providing specialty steel, guidance systems, and technical aid, said the *Far Eastern Economic Review* (June 22, 2000) and *New York Times* (July 2, 2000). Apparently confirming these stories, the DCI's "Section 721 report" wrote that in August 2000, besides North Korean help, PRC entities provided "increased assistance" to Pakistan's ballistic missile program in the second half of 1999. Also, China has assisted Pakistan with development of the Shaheen-2 two-stage, solid-fuel MRBM, reported *Jane's Defense Weekly* (December 13, 2000). DCI George Tenet confirmed concerns about such assistance in testimony on February 7, 2001, before the Senate Intelligence Committee, and in his February 2001 report on proliferation.

Despite the PRC's November 2000 missile nonproliferation pledge, in the first several months of 2001, a PRC company reportedly delivered 12 shipments of missile components to Pakistan's Shaheen-1 SRBM and Shaheen-2 MRBM programs, according to the *Washington Times* (August 6, 2001). On September 1, 2001, the State Department imposed sanctions on China Metallurgical Equipment Corporation (CMEC) for proliferation of missile technology (Category II items of the MTCR) to Pakistan. In November 2004, the DCI told Congress in a "Section 721 report" that, in the second half of 2003, PRC entities helped Pakistan to advance toward serial production of solid-fuel SRBMs (previously identified as the Shaheen-1, Abdali, and Ghaznavi) and supported Pakistan's development of solid-fuel MRBMs (previously noted as the Shaheen-2 MRBM). The intelligence community's "Section 721 report" told Congress in March 2009 that PRC "entities," including state-owned corporations, continued in 2008 to supply missile-related items to Pakistan.

Nuclear Technology Sales to Iran

Overview and Policy Approaches

In the mid-1990s, the Clinton Administration urged China to cancel ostensibly civilian nuclear projects in Iran. In negotiations leading up to the 1997 U.S.-PRC summit, China pledged to end nuclear cooperation with Iran. At the summit, President Clinton promised to implement the 1985 U.S.-PRC nuclear cooperation agreement (to sell nuclear power reactors to China). However, the United States has continued concerns about whether China has abided by its October 1997 promise. With revelations in 2002 about Iran's uranium enrichment program, the Bush Administration in 2004 sought PRC support for sanctions imposed by the U.N. **Security Council** (UNSC), where the PRC has power to vote in favor, abstain, or veto. The PRC's position has evolved to support some sanctions but not use of force. The PRC voted for UNSC Resolutions 1737 (2006), 1747 (2007), 1803 (2008), and 1929 (2010) to impose sanctions on Iran. However, the PRC also has increased investments in Iran's oil and gas projects in the energy sector.

As complementary or alternative approaches, some have viewed China's cooperation in pressuring Iran as necessarily for a working U.S.-PRC relationship, especially through the use of summits. Others have focused attention on sanctions to target Iran's energy-related investments, industries, and imports. An alternative would be to prevent transfers of Western technology to

Iran for developing its oil and gas industries. Diplomatic impasses have raised the burden on China's preferred dialogue to produce results in support of nonproliferation and stability in the Middle East. China likely fears greater instability or conflict in the Mideast, the source of about 50% of China's oil imports. China has tried to maintain a balanced position in support of Iran and U.S./European Union concerns, but also has evolved to support negotiations, the IAEA's authority in Iran, as well as some UNSC sanctions on Iran. Meanwhile, China pressed the United States to talk directly with Iran. If the United States shifted to hold direct dialogue with Iran without resulting in resolution of the dispute, the burden would be greater on China to place a higher priority on nonproliferation than business as usual (including energy deals), by pressuring Iran or showing results of dialogue. Another approach has looked at options to alleviate China's dependence on Iranian oil through imports from other countries. Reportedly, in 2009, the Obama Administration discussed with Saudi Arabia and United Arab Emirates (UAE) about raising their supplies of oil to meet China's need, but China refused an explicit deal. Yet another option would increase China's access to investments in U.S. or other Western energy projects.¹⁵ Still, others have viewed multilateral approaches as more critical in dealing with Beijing. More significant Russian nuclear cooperation with Iran has offered China maneuvering room in diplomacy. However, any closer Russian alignment with the United States and European countries would increase China's isolation at the UNSC. In addition to the three tracks supported by China (involving dialogue with Iran, the IAEA, and some UNSC sanctions), the United States, European and Asian allies, and Israel have options of sanctions separate from those imposed by the UNSC and the use of force (that would not require China's vote). Also, Congress and the Administration could urge allies and partners to suspend trade in Iran's oil and gasoline.

(For a separate discussion on U.S. policy and legislation regarding Iran, see CRS Report RL32048, *Iran: U.S. Concerns and Policy Responses*, by Kenneth Katzman.)

Canceled Nuclear Projects

Suspecting that Iran uses nuclear technology to build the technical infrastructure for its clandestine nuclear weapon program, Washington urged Beijing (and Moscow) not to transfer any nuclear technology to Iran. In 1995, China suspended a sale of nuclear reactors to Iran. Indicating Israeli influence, Prime Minister Benjamin Netanyahu publicly stated in August 1997 that PRC Vice Premier Li Lanqing said that China canceled plans to build the reactors.

However, there were other controversial PRC nuclear deals with Iran pointing to an Iranian nuclear weapon program. PRC technicians built a calutron, or electromagnetic isotope separation system, for enriching uranium at the Karaj nuclear research facility, according to "confidential reports" submitted to Iranian President Rafsanjani by his senior aides, according to the *London Sunday Telegraph* (as reported in the September 25, 1995, *Washington Times*). As reported, the PRC system was similar to the one used in Iraq's secret uranium enrichment program. Secretary of Defense William Perry confirmed in an April 1996 report that "the Iranians have purchased an electromagnetic isotope separation unit from China."¹⁶

The China Nuclear Energy Industry Corporation had planned to sell Iran a facility to convert uranium ore into uranium hexafluoride gas, which could be enriched to weapons-grade material,

¹⁵ *Guardian*, August 25, 2009; *Wall Street Journal*, October 20, 2009; *Haaretz*, December 17, 2009; *Reuters*, October 28, 2010.

¹⁶ Office of the Secretary of Defense, *Proliferation: Threat and Response*, April 1996.

according to the *Washington Post* (April 17, 1995; June 20, 1996). Intelligence reports said that the deal proceeded with PRC nuclear experts going to Iran to build the new uranium conversion plant near Isfahan, reported the *Washington Times* (April 17, 1996). However, PRC civilian nuclear officials later indicated to the IAEA and U.S. officials that China would not transfer the uranium conversion facility, ostensibly because of Iran's inability to pay, reported the *Washington Post* (November 6, 1996). However, China's role as nuclear supplier appeared to have been affected by Iran's turn to Russia to build a nuclear reactor at Bushehr. Also, China seemed to respond to concerns of Israel (after Russia, the secondary supplier to China's military).

1997 Promise

China's concern about its standing with the United States was also important. State Department official Robert Einhorn told Congress that China canceled the uranium conversion project but had provided Iran with a blueprint to build the facility, reported the *Washington Post* (September 18, 1997). On the eve of a U.S.-China summit in Washington in October 1997, PRC Foreign Minister Qian Qichen provided a secret letter to Secretary of State Madeleine Albright, promising not to begin new nuclear cooperation with Iran, after building a small nuclear research reactor and a factory to fabricate zirconium cladding to encase fuel rods in nuclear reactors, according to the *Washington Post* (October 30, 1997). U.S. officials said the projects would not be significant for nuclear proliferation.

After President Clinton signed certifications in January 1998 to implement the 1985 bilateral nuclear cooperation agreement, as promised at the 1997 summit, the *Washington Post* (March 13, 1998) reported that at a closed hearing of the Senate Foreign Relations Committee on March 12, 1998, Clinton Administration officials disclosed negotiations in January 1998 between the China Nuclear Energy Industry Corporation and Iran's Isfahan Nuclear Research Center to provide "a lifelong supply" of hundreds of tons of anhydrous hydrogen fluoride (AHF), or hydrofluoric acid, under falsified documents about end-users. (The AHF chemical could be used to produce uranium hexafluoride used in uranium conversion facilities. AHF is also a precursor for the chemical weapon agent Sarin.) According to the press, after Washington protested, Beijing stopped the sale. The Administration argued that Beijing responded positively and that the chemical is controlled by the Australia Group and not on a nuclear control list. Later, on April 2, 1999, U.S. intelligence report was said to suggest that the China Non-metallic Minerals Industrial Import/Export Corporation "revived" negotiations with the Iranian Atomic Energy Organization on the construction of a plant to produce graphite (used as a moderator in some reactors), reported the *Washington Times* (April 15, 1999).

In the February 2001 "Section 721 Report" (on the first half of 2000), the DCI dropped an earlier observation that the 1997 pledge appeared to be holding. In testimony before the Senate Governmental Affairs Subcommittee on International Security, Proliferation, and Federal Services on June 6, 2002, Assistant Secretary of State John Wolf stated concerns about possible PRC-Iranian interactions "despite China's 1997 pledge to end its nuclear cooperation with Iran."

Uranium Enrichment

In 2002, an Iranian opposition group revealed that Iranian front companies procured materials from China (and other countries) for secret nuclear weapons facilities, while experts from China worked at a uranium mine at Saghand and a centrifuge facility (for uranium enrichment) near Isfahan, reported the *Washington Post* (December 19, 2002, and February 20, 2003). Moreover,

Nucleonics Week (February 27 and March 6, 2003) reported that Iran, since 2000, was building a secret uranium enrichment plant at Natanz with technology for gas centrifuge enrichment from Pakistan (Khan Research Laboratories), a country that has received nuclear cooperation from China. Also, the IAEA found out in 2003 that, in 1991, China supplied Iran with 1.8 metric tons of natural uranium, reported *Nucleonics Week* (June 12, 2003). The head of the Iranian Atomic Organization reported an Iranian-PRC contract to extract uranium ore in Yazd.¹⁷ The DCI's "Section 721 report" (issued in November 2004) confirmed that the Iranian opposition group, "beginning in August of 2002, revealed several previously undisclosed Iranian nuclear facilities."

In testimony to Congress on February 11, 2003, DCI George Tenet pointed to China's "firms" (rather than the government) and warned that they "may be backing away from Beijing's 1997 bilateral commitment to forego any new nuclear cooperation with Iran." The DCI's "Section 721 report" of November 2003 reported that "some interactions of concern" between PRC and Iranian entities continued in the first half of 2003. The Director of the Defense Intelligence Agency, Vice Admiral Lowell Jacoby, testified to the Senate Intelligence Committee on February 24, 2004, that PRC entities "remain involved with nuclear and missile programs in Pakistan and Iran, while, "in some cases," the entities are involved without the PRC government's knowledge. Then, in April 2004, the Administration imposed sanctions under the Iran Nonproliferation Act. Assistant Secretary of State John Wolf testified to the House International Relations Committee on May 18, 2004, that "most" of the sanctions related to non-nuclear transfers, but there were concerns in the nuclear area as well.

In May 2006, diplomatic sources revealed that Iran had used uranium hexafluoride gas (UF₆) from China to accelerate Iran's uranium enrichment program. An Iranian news agency acknowledged that hexafluoride from China was used in initial uranium enrichment, after which domestic supplies were applied.¹⁸

China's companies reportedly have helped Iran to procure nuclear-related hardware. In 2007, a PRC company in Dalian supplied Iran with sensitive materials for its nuclear program, including graphite, tungsten copper, tungsten powder, and high-strength aluminum alloys and maraging steel. In March 2009, the Shanghai-based Roc-Master Manufacture and Supply Company ordered 108 pressure gauges that could be used in centrifuges to enrich uranium for transfer to Iran from an agent in Taiwan (Heli-Ocean Technology Company) for Inficon Holding, the manufacturer in Switzerland. In 2010, under an IAEA investigation, China's Zhejiang Ouhai Trade Corporation, a subsidiary of Jinzhou Group, supplied to Iran sensitive valves and vacuum gauges useful for uranium enrichment and made by KD Valves-Descote in France. The reported recipient in Iran was Javedan Mehr Toos, a firm procuring nuclear-related items for Kalaye Electric Company that is part of the Atomic Energy Organization of Iran. The French firm denied selling its sensitive products to China, and the PRC company denied the story.¹⁹ On June 16, 2010, the Department of the Treasury imposed sanctions on Javedan Mehr Toos among Iran's entities, individuals, and ships subject to U.S. sanctions under Executive Order 13382 for WMD proliferation.

¹⁷ *Mehr News Agency*, Tehran, December 10, 2004.

¹⁸ "Iran Using Chinese-made Feedstock for Enriched Uranium: Diplomats," *AFP*, May 18, 2006; *Iranian Students News Agency*, May 19, 2006.

¹⁹ Peter Enav and Debby Wu, "How Nuclear Equipment Reached Iran," *AP*, February 28, 2010; Verna Yu, "Mainland Firm Denies Breaking Sanctions on Iran," *South China Morning Post*, March 2, 2010; Peter Fritsch and David Crawford, "Western Authorities Investigate China Connection in Export of French Valves," *Wall Street Journal*, April 3, 2010; James Areddy, "China Firm Denies Iran Nuclear Role," *WSJ*, April 15, 2010; John Pomfret, "U.S. Says Chinese Businesses and Banks Are Bypassing U.N. Sanctions Against Iran," *Washington Post*, October 18, 2010.

Dual Approach and Energy-related Oil and Gas Deals

Since 2004, the United States has sought China's cooperation (with its veto power) at the IAEA and U.N. to achieve the U.S. and European objective of containing Iran's suspected nuclear weapon program by having the IAEA refer Iran's case to the U.N. Security Council (UNSC) for sanctions in response to Iran's suspected violation of the NPT. The talks are called "P5+1" referring to the five permanent members of the UNSC plus Germany or "E3+3" referring to the three European Union countries of Britain, France, and Germany plus the United States, Russia, and China. While it might share U.S. concerns about nuclear nonproliferation, China has expressed reservations about sanctions and the credibility of some U.S. intelligence. Moreover, China's own "entities" have supplied sensitive technology to Iran. Beijing has interests in raising its leverage vis-à-vis Washington, including to check U.S. dominance and support for Taiwan.

Meanwhile, China has a competing priority of economic ties with Iran to fuel economic growth partly with global investments, and China opposes sanctions that would target energy deals. There are concerns that China's economic interests and influence in Iran, including multi-billion-dollar oil and gas deals, have undermined rising U.S., European, and Asian pressure on and isolation of Iran, and that China could capitalize on other countries' sanctions by filling in situations where U.S., European, and Asian companies pull back from investments in or supplies to Iran. The PRC has not announced formal unilateral sanctions on Iran's energy sector or support for those of other countries. The PRC's exploitation of sanctions for gains could unravel international solidarity.

Reportedly, PRC companies, such as Sinopec and Zhuhai Zhenrong Corporation, have imported crude oil from Iran. While the PRC's import of oil from Iran increased by 9% from 2008 to 2009, the import of oil from Iran dropped by 8% from 2009 to 2010. Nonetheless, Iran remained the third largest foreign supplier of crude oil to China (after Saudi Arabia and Angola), providing for 9% of the PRC's total imports of oil. At the start of 2011, Zhuhai Zhenrong and Sinopec signed contracts to import Iran's oil at the same level as the previous year.²⁰

At the same time, PRC state-owned companies like Sinopec and China National Petroleum Corporation (CNPC) have invested significantly in Iran's oil and gas sector. China's companies reportedly promised investments totaling about \$55 billion in Iran's energy industries by the end of 2009. However, committed funds is difficult to confirm. Moreover, progress depends on advanced technology. China lacks gas liquefaction technology, though CNPC's Huanqiu Contracting and Engineering Corporation aims to build a natural gas liquefaction plant by 2016.²¹

The PRC's investments include the following significant projects. In October 2004, China and Iran signed a memorandum of understanding to develop Iran's Yadavaran oil field in a project initially worth \$70 billion. Amid ongoing negotiations between China's Sinopec and Iran, this potential venture was valued at up to \$100 billion in early 2006. In December 2007, Sinopec signed the contract to invest about \$2 billion to develop the Yadavaran oil field, and the State Department responded that it was deeply disappointed and disturbed at this deal. In addition to Sinopec, the China National Offshore Oil Corporation (CNOOC) and an Iranian company signed a memorandum of understanding in December 2006 involving an investment from China worth \$16 billion to produce liquefied natural gas (LNG) at the North Pars gas field. With a delay in further commitment, CNOOC reportedly signed the contract in May 2009. In January 2007,

²⁰ *Fars*, November 21, 2007; *Reuters*, December 13, 2007; *Reuters*, January 20, 2011; *Global Trade Atlas*.

²¹ *Reuters*, August 18, 2010, January 14, 2011.

CNPC announced an investment of \$3.6 billion to develop Phase 14 at Iran's South Pars gas field. In the presence of the PRC ambassador, CNPC also signed a contract worth \$1.8 billion in January 2009 to develop Iran's North Azadegan oil field, and the PRC Foreign Ministry called the deal "normal energy cooperation." In March 2009, China's HuaFu Engineering Company signed a contract apparently to invest \$3.2 billion to produce LNG at Phase 12 of the South Pars gas field. Then in June, CNPC signed a contract worth \$4.7 billion to develop Phase 11 of South Pars, reportedly replacing Total of France, but Total said it was still involved. In August 2009, a state-owned insurance company, likely Sinosure, reportedly indicated an investment of \$11.3 billion in Iran's oil refineries. China's Sinopec reportedly agreed in a memorandum of understanding in November 2009 to invest \$6.5 billion in Iran's refineries to reduce its dependence on imported gasoline. Japan has had concerns that China could take over its investment in the South Azadegan oilfield, with reports that China National Petroleum Corporation International (CNPCI) gained 70 percent share in September 2009 after Japan's Inpex company reduced its stake from 75% in 2004 to 10% in 2006. Inpex decided in September 2010 to withdraw from South Azadegan.²²

Regarding China's gasoline supplies, Zhuhai Zhenrong (and possibly others) reportedly started in 2008 to sell gasoline through intermediaries to Iran, supplying one-third of its imports by September 2009. Further, in early 2010, a PRC state-owned company, Chinaoil, sent two shipments of gasoline in the company's first direct exports to Iran since January 2009, and Sinopec also planned to sell gasoline to Iran. In August 2010, China's Zhuhai Zhenrong in partnership with Russia's LUKOIL exported gasoline to Iran. By then, PRC supplies of gasoline to Iran reached about one-half of its imports. Zhuhai Zhenrong is a state-owned enterprise, set up in 1994 not only by the PRC's State Council (like a Cabinet) but also the Central Military Commission (high command of the People's Liberation Army). The company has worked with Iran's Ministries of Defense and Oil. Another PRC state-owned enterprise, ZhenHua Oil, reportedly started to supply gasoline to Iran in 2009, providing up to one-third of Iran's imports by early 2010.²³ ZhenHua Oil was set up in 2003 as a subsidiary of China North Industries Corporation (NORINCO), a defense industrial conglomerate. U.S. sanctions have applied to NORINCO (see table at the end of this CRS Report).

Since 2010, concerns increased about enforcement of U.S. sanctions against PRC companies, after enactment of the Comprehensive Iran Sanctions, Accountability, and Divestment Act (CISADA) of 2010 as **P.L. 111-195** on July 1, 2010, following UNSC Resolution 1929 of June. China did not replace India in the original proposal for an Iran-Pakistan-India gas pipeline, when the agreement was reached in June 2010 for the Iran-Pakistan pipeline. In addition to the United States, Canada, Australia, the European Union, Japan, and South Korea imposed sanctions on Iran, and they have concerns about China's exploitation of their sanctions that restrain investments in Iran. At a press conference on August 4, 2010, the State Department's Special Advisor for Nonproliferation and Arms Control Robert Einhorn acknowledged U.S. concerns that China's companies would benefit from sanctions by taking over deals abandoned by other foreign companies in support of U.S. and other sanctions against Iran's energy sector, unilateral sanctions opposed by China for "expanding" UNSC sanctions. Einhorn said that the Obama Administration

²² Numerous sources include *Wall Street Journal* and *Washington Post*, February 17, 2006; *China Daily*, January 6, 2007; *AFP*, January 11 and 15, 2007; *Fars News Agency*, January 16, 2007; *Vision of the Islamic Republic of Iran Network*, December 9, 2007; *Reuters*, December 10, 2007; *Dongfang Zaobao*, December 11, 2007; *Xinhua*, January 14, 2009; *AP*, March 14, 2009; *Upstream*, March 20, 2009; *Global Insight*, May 29, 2009; *Reuters*, June 3 and 4, 2009; *Tehran Times*, August 30, 2009; *Iran Daily*, August 31, 2009; *Jiji Press*, September 30, 2010.

²³ *Financial Times*, September 22, 2009; *Reuters*, September 23, 2009; *Mehr News Agency*, September 29, 2009; *Reuters*, November 25, 2009; *Financial Times*, March 7, 2010; *Reuters*, April 14, 2010; *Reuters*, August 11, 2010.

urged China to act as a “responsible stakeholder.” Two days later in Beijing, PRC Vice Premier Li Keqiang met with Iran’s Oil Minister, but Li discussed “existing” projects, with no reported PRC commitment to new deals. In September 2010, Einhorn then went to Beijing with a “significant list” of PRC companies and banks that were suspected of violating U.N. sanctions, with or without the PRC government’s approval of deals that occurred before and after June 2010. Einhorn also urged the PRC’s oil companies, such as CNPC, to stop or limit investments in Iran, at least temporarily. The State Department said on October 18, 2010, that it provided information to China about “specific concerns” about some PRC “companies,” and that the PRC promised to investigate the cases. However, the PRC Foreign Ministry said the next day that it was following “the letter” of UNSC resolutions, with no mention of other sanctions on Iran’s energy sector or of any PRC investigations into the U.S. information on PRC entities. Still, by that month, the PRC government reportedly issued informal orders to its companies to slow down their work in Iran’s energy projects. For example, apparently, CNPC suspended work at the South Azadegan oil field, the project that raised Japan’s concern (as discussed above).²⁴

As for the PRC’s actions on U.S. information about PRC companies, Under Secretary of State William Burns testified to House Foreign Affairs Committee on December 1, 2010, that the Obama Administration took seriously all information about PRC companies and provided that information to the PRC. He acknowledged that “in some cases,” the PRC acted on the information, but “the record is a mixed one,” and the Administration continued to raise concerns. On the eve of top PRC ruler Hu Jintao’s state visit in Washington, Secretary of State Hillary Clinton said on January 18, 2011, in an interview with ABC that some PRC entities were still not “as in compliance” with sanctions on Iran as the United States expected, with the PRC responding that it enforced only sanctions under UNSC resolutions. She said that the U.S. expectation conveyed to Beijing was to implement all other sanctions on Iran.

UNSC Resolutions and Sanctions

On November 5, 2004, China’s Foreign Minister Li Zhaoxing talked with Secretary of State Powell, saying that the dispute over Iran’s nuclear program should remain under the IAEA’s handling. On the next day, Li arrived in Tehran and opposed referral of Iran’s case to the UNSC.²⁵ Then, at a meeting on the sideline of a U.N. summit in New York on September 13, 2005, President Bush tried to persuade PRC ruler Hu Jintao not to block the IAEA from referring Iran’s case to the UNSC. Before the meeting, the Administration briefed China on U.S. classified intelligence about Iran’s development of the Shahab-3 missile that could deliver a nuclear warhead. China (and others) abstained when the IAEA passed a resolution on September 24, 2005, declaring that Iran was not complying with the NPT, and the PRC envoy in Vienna continued to call for dealing with Iran at the IAEA.²⁶ In Beijing in November 2005, President Bush said that he had to repeat to Hu the need to stop Iran from developing nuclear weapons.²⁷

²⁴ *Shana News Agency*, June 13, 2010; *Xinhua*, August 6, 2010; *Caixin Wang*, August 19, 2010; *Washington Post*, October 18, 2010; *Reuters*, October 28, 2010.

²⁵ *Zhongguo Wang*, Beijing, October 31, 2004; *Xinhua*, Beijing, November 5, 2004; *IRNA*, Tehran, November 6, 2004; *Xinhua*, Beijing, November 8, 2004.

²⁶ *New York Times*, September 14, 2005; *Wall Street Journal*, September 14, 2005; *AFP*, September 24, 2005; and *Xinhua [New China News Agency]*, September 24, 2005.

²⁷ George Bush, interview with Phoenix TV, based in Hong Kong, November 9, 2005.

The situation escalated on January 10, 2006, when Iran resumed work on uranium enrichment, after allowing IAEA inspectors to place seals on equipment at an enrichment plant at Natanz and starting negotiations with Britain, France, and Germany two years before. Deputy Secretary of State Robert Zoellick visited Beijing January 24-25, 2006, to stress the importance of the Iran problem, continue the “Senior Dialogue” over the PRC’s role as a “responsible stakeholder,” and discuss a summit on April 20 between PRC leader Hu Jintao and President Bush in Washington. At a news conference in Beijing on January 24, Zoellick acknowledged differences with China over “diplomatic tactics.” At a special meeting in London on January 30, China, France, Germany, Russia, United Kingdom, and United States announced their agreement to “report” (rather than “refer”) Iran’s case to the UNSC at the special IAEA meeting in early February but to wait until March to decide at the Security Council on any actions to support the IAEA (without mentioning sanctions).²⁸ Still, on February 4, China was one of 27 countries that voted at the IAEA to support a resolution to report Iran to the UNSC, showing some progress in China’s cooperation since it abstained on a resolution on Iran in September 2005.

When the IAEA sent a report on Iran to the Security Council on March 8, 2006, saying that it could not conclude that there are no undeclared nuclear materials or activities in Iran, China continued to be less critical of Iran and to favor the handling of this issue at the IAEA rather than the Security Council. On March 29, 2006, after weeks of negotiations, the Security Council issued a statement through its president, calling on Iran to suspend all nuclear enrichment and reprocessing activities to be verified by the IAEA and requesting an IAEA report in 30 days to the IAEA Board of Governors “and in parallel” to the Security Council, with no mention of sanctions. The Administration called for a UNSC resolution that invokes Chapter VII of the U.N. Charter (for sanctions or force), but the PRC argued against such action despite the IAEA’s April 28 report on Iran’s non-compliance.

On May 31, 2006, Secretary of State Rice announced U.S. support for a new approach to offer a package of incentives and costs for Iran’s compliance, agreed by China and others on June 1. However, to U.S. displeasure, on June 16, the PRC hosted a summit of the Shanghai Cooperation Organization (SCO), at which Iran attended as an observer. PRC President Hu Jintao balanced his remarks to Iranian President Ahmadinejad by saying that Iran had a right to nuclear energy and calling for its response to the offer. But with no Iranian response, on July 12, China and the other five countries issued a statement agreeing to a two-stage approach: to seek a UNSC resolution to make it mandatory for Iran to suspend nuclear enrichment as required by the IAEA; and if Iran refused, to adopt measures under Article 41 (for sanctions, not use of force) of Chapter VII.

After Iran announced that it would respond on August 22, 2006, China voted on July 31 with other members of the UNSC (except Qatar) for **Resolution 1696**, demanding that Iran suspend nuclear enrichment; calling upon countries to prevent technology transfers to Iran’s nuclear enrichment and missile programs; requesting an IAEA report on Iran’s compliance by August 31; and warning of sanctions if Iran does not comply. After negotiations over Russian and PRC objections to the first U.S. and European draft resolution on sanctions, China voted with all other Security Council members for **Resolution 1737** on December 23, 2006, which invoked Article 41 of Chapter VII to require Iran to suspend nuclear enrichment and reprocessing activities, and heavy water-related projects. On January 5, 2007, in Beijing, PRC President Hu Jintao stressed the “unanimous” adoption of 1737 to visiting Iranian nuclear official Ali Larijani. After negotiations on additional sanctions on Iran (during which China and Russia objected to a ban on

²⁸ “Permanent Five Say IAEA Must Report Iran to U.N.,” *Reuters*, January 31, 2006.

Iran's arms imports and export credit guarantees for doing business in Iran),²⁹ China voted with all other members of the U.N. Security Council for **Resolution 1747**, adopted unanimously on March 24, 2007. Citing Article 41 of Chapter VII, the resolution banned Iran's arms exports.

However, the United States raised the problem with China of its violation of UNSC Resolutions 1737 and 1747. In particular, U.S. officials reportedly said in July 2007 that earlier in the year, a PRC "entity" (probably one under U.S. sanctions) tried to ship a large amount of chemicals used to make solid fuel for ballistic missiles. Cooperating with U.S. intelligence, Singapore intercepted the container from China on its way to the Shahid Bagheri Industrial Group in Iran.³⁰ This Iranian organization was listed in the Annex of UNSC Resolution 1737, but sanctions for entities or people in the Annex involve restricting travel and freezing financial assets. Still, Resolution 1737 decided that all States take the necessary measures to prevent transfers directly or indirectly from their territories that could contribute to Iran's development of nuclear weapon delivery systems. Resolution 1747 called for restraint in transfers related to arms and missiles to Iran.

After the IAEA reported on May 23, 2007, that Iran continued nuclear enrichment activities, the Bush Administration called for a third UNSC resolution with tougher sanctions on Iran.³¹ On September 28, China joined with the United States, France, Germany, Russia, and United Kingdom in issuing a foreign ministers' statement in support of negotiations, the IAEA, as well as a third UNSC resolution with sanctions. However, on October 17, China refused to attend a meeting in Berlin on Iran's nuclear program, citing "technical" difficulties. China apparently tried to make a linkage to an unrelated matter. U.S. officials said China showed displeasure over that day's award in the U.S. Capitol of the Congressional Gold Medal to Tibet's Dalai Lama.

Even as the UNSC expected the IAEA's report and PRC Foreign Minister Yang Jiechi visited Tehran on November 13, China's Foreign Ministry spokesman criticized sanctions as being of "no help." In contrast, two days later, Under Secretary of State Nicholas Burns expressed concerns about China's increasing civilian and military trade with Iran and called on China to agree to have the next meeting on sanctions and "take a much more resolute role."³² China again did not attend a meeting scheduled for Brussels on November 19, citing "scheduling reasons."

On December 3, 2007, the United States issued a new National Intelligence Estimate (NIE) on Iran's nuclear capabilities, finding that, in the fall of 2003, Iran had halted its nuclear *weapons* program but in January 2006, resumed its declared uranium enrichment activities. In response, the PRC's ambassador at the U.N. said that the situation for imposing more sanctions had changed. (Later, in the Section 721 Report to Congress for 2009, U.S. intelligence reported an assessment that Iran kept open the option to develop nuclear weapons without knowing whether Iran eventually will decide to produce nuclear weapons. Also, Iran continued uranium enrichment.)

Nonetheless, in January 2008, China's shifted to support a third sanctions resolution at the UNSC, upon talks with Deputy Secretary of State John Negroponte who visited China for the bilateral

²⁹ "Nations Closer to Deal on Iran Sanctions," *AP*, March 13, 2007; and Colum Lynch, "6 Powers Agree on Sanctions for Iran," *Washington Post*, March 16, 2007.

³⁰ Jim Wolf, "U.S. Faults China on Shipments to Iran," *Reuters*, July 12, 2007; Neil King Jr., "China-Iran Trade Surge Vexes U.S.," *Wall Street Journal*, July 27, 2007.

³¹ Karen DeYoung, "Iranian Defiance of U.N. Detailed," *Washington Post*, May 24, 2007; State Department, Daily Press Briefing, July 26, 2007.

³² Quoted by Robin Wright, "U.S. to Seek New Sanctions Against Iran," *Washington Post*, November 16, 2007.

Senior Dialogue and argued for another UNSC resolution because of Iran's violation of the previously passed resolutions. At the same time, at his press conference in Beijing on January 17, Negroponte volunteered criticism of Taiwan's planned referendums on membership in the U.N. Beijing did agree to send Foreign Minister Yang Jiechi to a six-nation meeting on sanctions at Berlin on January 22, 2008. Yang reportedly agreed to a draft UNSC resolution only with compromise language that excluded new sanctions on freezing assets of Iranian banks and military units, and on Iran's arms imports. Also, in a meeting in Beijing on February 26 with Secretary of State Rice, Foreign Minister Yang urged for a resumption of U.S. dialogue with Iran.

Based on the compromise in January, the U.N. Security Council passed (with Indonesia abstaining) **Resolution 1803** on March 3, 2008. This third UNSC sanctions resolution called for travel restrictions and bans; bans on dual-use nuclear trade; "vigilance" in export credits and financial transactions with Iranian banks; and cargo inspections. At the same time, China stressed that the sanctions would not affect its "normal" business with Iran and called for negotiations.

While the United States and other countries sought a fourth set of UNSC sanctions on Iran, top PRC leader Hu Jintao met with Iranian President Mahmoud Ahmadinejad in Beijing on September 6, 2008, and expressed respect for Iran's right to peaceful use of nuclear energy as well as support for the nuclear non-proliferation regime. China raised another concern when it tried to link the six-nation diplomacy on Iran's nuclear program to U.S. arms sales to Taiwan. After the Bush Administration notified Congress on October 3 of pending arms sales to Taiwan, the PRC blocked U.S. efforts to set up a conference call among the six countries to discuss Iran.³³ But later, on February 4, 2009, PRC Assistant Foreign Minister Liu Jieyi showed up at a six-nation (E3+3) meeting in Wiesbaden, Germany, to discuss Iran's nuclear program.

In April 2009, the **Obama Administration** shifted policy to participate regularly in E3+3 talks with Iran. At the same time, some observers in the EU reported that "because of a lack of any real leverage over China on the issue [of Iran's nuclear program], other than pointing to the threat of U.S. or Israeli attack on Iranian nuclear sites, the EU has been unable to persuade China to back tougher sanctions." They also pointed out that China actually shielded Iran from tougher sanctions and reinforced its economic influence in Iran.³⁴

The Obama Administration also sought to "reset" the relationship with Russia for closer cooperation, which could bring an increasingly isolated China to respond to greater multilateral pressure in how to deal with Iran. After Iran disclosed to the IAEA in September 2009 what was a second, secret uranium enrichment plant at Qom, Russia proposed that Iran send enriched uranium to Russia for processing for use in a research reactor. Russian President Dmitry Medvedev also discussed possible sanctions. (In 1995, Russia and Iran signed a contract for a Russian-built nuclear reactor at Bushehr in Iran. In 2005, Russia proposed that Iran transfer nuclear material from the Russian-built nuclear plant to Russia and to conduct nuclear enrichment at a facility in Russia. On November 16, 2009, Russia's Energy Minister indicated that the reactor would not start operations in 2009 due to "technical" reasons, but the announcement came one day after Presidents Barack Obama and Dmitry Medvedev expressed concerns in a meeting in Singapore about Iran's uranium enrichment program.)³⁵ In February 2010, Russia joined France

³³ Matthew Lee, "China Blocks New Iran Sanctions Talks," *Associated Press*, October 16, 2008; Author's consultation.

³⁴ John Fox and Francois Godement, "A Power Audit of EU-China Relations," European Council on Foreign Relations, April 2009.

³⁵ AP, November 18, 2005; *Financial Times*, September 25, 2009; *New York Times*, October 1, 2009.

and the United States in criticizing Iran when it announced a plan to enrich uranium to 20% U-235, developments that further increased pressure on the PRC to sanction Iran.

A week after President Obama's summit in Beijing on November 17, 2009, at which he pressed China to cooperate in dealing with Iran, PRC Foreign Minister Yang Jiechi called Secretary of State Hillary Clinton. Prior to the summit, Administration officials had traveled to Beijing to warn that Israel regarded Iran's nuclear program an "existential" threat and could bomb Iran. The PRC told Clinton of its support for a **IAEA resolution** critical of Iran. The IAEA passed a resolution on November 27, censuring Iran's nuclear enrichment facility at Qom. Further, in February, April, and October 2010, Israel sent officials to China to urge its cooperation to sanction Iran. As discussed above, the Administration urged Saudi Arabia and the UAE to increase oil supplies to China to reduce its dependence on Iran's oil. Moreover, visiting the two countries in March 2010 for talks that included sanctions against Iran, Defense Secretary Robert Gates confirmed that all the Persian Gulf states were worried about Iran's nuclear program and missile proliferation, and he asked the Saudi king to urge China to support UNSC sanctions against Iran.³⁶

Thus, China faced increased international pressures to act on additional sanctions against Iran. Still, in diplomatic negotiations on another UNSC Resolution on a fourth set of sanctions, China reportedly opposed sanctions to target Iran's oil and gas industry. President Obama made some progress with PRC leader Hu Jintao when he attended the Nuclear Security Summit in Washington on April 12, 2010, and Hu used the word "sanctions" for work at the UNSC.³⁷ On June 9, 2010, China voted for **UNSC Resolution 1929** to impose sanctions against Iran. The resolution simply noted the potential connection between Iran's revenues derived from its energy sector and funding of Iran's nuclear activities. Among the sanctions, the resolution called on all countries to prevent the direct or indirect supply to Iran of certain major weapons. However, as the United States and other countries imposed unilateral sanctions including ones that target Iran's energy sector, concerns increased that China could fill in gaps and benefit from such sanctions (as discussed above). Days before Hu Jintao's state visit in Washington on January 19, 2011, the United States and EU discouraged China from joining Iran's invited tour of its nuclear sites, rather than IAEA inspections, and China implied that it declined to visit. Days later, on January 22, China was said to stay in solidarity with the others in talks with Iran.³⁸ The **U.S.-PRC Joint Statement** issued at that summit called for full implementation of UNSC Resolutions on Iran, but it did not refer to the other sanctions or express opposition to Iran's nuclear activities. Indeed, the statement mentioned positively Iran's right to peaceful uses of nuclear energy under the NPT.

Missile Technology Sales to Iran

Overview

During the Clinton Administration, PRC entities reportedly transferred equipment and technology to Iran's missile programs, including development of medium-range ballistic missiles. In November 2000, the United States determined that missile technology transfers took place but

³⁶ *Washington Post*, November 26, 2009; IAEA Resolution Gov/2009/82, November 27, 2009; *Jerusalem Post*, February 28, 2010; *American Forces Press Service*, March 11, 2010; *Sunday Times*, April 4, 2010; *New York Times*, June 8, 2010; *Jerusalem Post*, October 7, 2010.

³⁷ *Guardian*; *Washington Post*; *Associated Press*, April 14, 2010.

³⁸ *Reuters*, January 5, 2011; PRC Foreign Ministry, January 13, 2011; *Washington Post*, January 22, 2011.

waived sanctions, citing a new PRC promise on missile nonproliferation. However, PRC entities have continued missile-related proliferation activities in Iran. In contrast to the previous administration, the Bush Administration stressed the use of sanctions against PRC entities, including “serial proliferators.” Nonetheless, this record raised questions about the effectiveness of this approach as well as the PRC’s commitment and capability to control its exports to Iran.

Clinton Administration

Related to ballistic missile programs in Iran, the CIA found that China delivered dozens or perhaps hundreds of missile guidance systems and computerized machine tools to Iran sometime between mid-1994 and mid-1995, reported the *International Herald Tribune* (June 23, 1995). The November 21, 1996, *Washington Times* cited a CIA report as saying that China agreed in August 1996 to sell to Iran’s Defense Industries Organization gyroscopes, accelerometers, and test equipment, which could be used to build and test components for missile guidance. On the same day, the State Department would only say publicly that “we believe at this stage that, in fact, the Chinese are operating within the assurances they have given us.”

The *Washington Times* (September 10, 1997) cited Israeli and U.S. intelligence sources as saying that China Great Wall Industry Corp. (which markets satellite launches) was providing telemetry equipment used in flight-tests to Iran for its development of the Shahab-3 and Shahab-4 MRBMs (with ranges, respectively, of about 800 mi. and 1,250 mi.). Over 100 PRC and North Korean experts worked there, reported the *Washington Times* (November 23, 1997) and *Washington Post* (December 31, 1997). Citing a May 27, 1998, intelligence report, the June 16, 1998, *Washington Times* reported that, in May 1998, China discussed selling telemetry equipment (for testing missiles) to Iran. On July 22, 1998, Iran first tested the mobile Shahab-3 missile, which the Pentagon, on the next day, confirmed to be based on a North Korean Nodong MRBM. In Beijing in November 1998, Acting Under Secretary of State John Holum protested continuing PRC missile technology aid to Iran, including a reported shipment of telemetry equipment in November 1998, according to the *Washington Post* (November 13, 1998) and *Washington Times* (December 7, 1998). U.S. intelligence suspected continued PRC sales of missile technology to Iran in 1999, including specialty steel, telemetry equipment, and training on inertial guidance, reported the *Washington Times* (April 15, 1999).

On November 21, 2000, under the AECA and EAA, the Clinton Administration said it determined that PRC entities had transferred Category II items (missile components) to Iranian entities and U.S. sanctions would be waived on China given its new missile nonproliferation promise.

Bush Administration

Still, the *Washington Times* (January 26, 2001) said that NORINCO (a PRC defense industrial conglomerate) shipped specialty metals and chemicals used in missile production to Iran. On the national emergency regarding weapons proliferation, President Bush continued to report to Congress in June 2002 that PRC (and North Korean and Russian) entities “have continued to supply Iran with a wide variety of missile-related goods, technology, and expertise.”³⁹ The report

³⁹ President Clinton declared the national emergency with respect to the proliferation of weapons of mass destruction in Executive Order 12938 on November 14, 1994. President George W. Bush, *Report to Congress on the Emergency Regarding Proliferation of Weapons of Mass Destruction*, June 18, 2002.

confirmed that the May 2002 sanctions under the Iran Nonproliferation Act of 2000 (P.L. 106-178) were imposed on three PRC entities for conventional transfers to Iran related to unspecified missiles. It also noted that the Administration did not impose new missile proliferation sanctions (under the AECA and EAA) between November 2001 and May 2002. (The Iran Nonproliferation Act authorizes sanctions on a foreign person based on “credible information” of a transfer to Iran (not necessarily a weapons program) of technology controlled by multilateral nonproliferation regimes. The AECA and EAA require sanctions based on a presidential determination that a foreign entity “knowingly” transferred any MTCR missile equipment or technology to a program for an MTCR Category I missile.)

On May 23, 2003, the Administration imposed sanctions on NORINCO and Iran’s Shahid Hemmat Industrial Group, under Executive Order (E.O.) 12938 (as amended by E.O. 13094). According to U.S. officials, the Administration banned imports from NORINCO for two years (worth over \$100 million annually), because it transferred missile technology to Iran, even after the PRC issued missile technology export controls in August 2002, that would assist the development of medium- or long-range ballistic missiles, reported *Reuters* (May 22) and *Wall Street Journal* (May 23, 2003). (E.O. 12938 requires sanctions if the Secretary of State determines that a foreign person has “materially contributed or attempted to contribute materially” to WMD or missile proliferation.)

Again on June 26, 2003, the Administration imposed sanctions under the Iran Nonproliferation Act on five PRC entities (including NORINCO) and one North Korean entity. The State Department noted that it added in the act’s required report to Congress (a classified report was submitted on June 25) transfers of items that have the potential to make a “material contribution” to WMD, cruise missiles, or ballistic missiles, even if the items fall below the parameters of multilateral export control lists.

On April 1, 2004, the Bush Administration imposed sanctions under the Iran Nonproliferation Act based on “credible information” that five PRC entities (along with other foreign entities) transferred unspecified prohibited items to Iran. Assistant Secretary of State John Wolf testified to the House International Relations Committee on May 18, 2004, that “most” of the sanctions related to non-nuclear transfers, but there were concerns in the nuclear area as well. The *Washington Times* reported on August 23, 2004, that the U.S. government detected several weeks before that a PRC company supplied missile technology to Iran within the past six months. On September 20, 2004, under E.O. 12938 (amended by E.O. 13094), the State Department imposed sanctions on Xinshidai (New Era Company), a defense-industrial conglomerate, for material contributions to missile technology proliferation in a publicly unnamed country. The Bush Administration again imposed sanctions on PRC entities under the Iran Nonproliferation Act, in September, November, and December 2004.

Under Secretary of State John Bolton said in a speech in Tokyo in February 2005 that the PRC government still had not taken action to stop NORINCO’s missile proliferation activities in Iran, despite repeated sanctions on this “serial proliferator” costing NORINCO hundreds of millions of dollars in banned exports to the United States.⁴⁰ On December 23, 2005, the Administration again imposed sanctions for missile and chemical weapon (CW)-related proliferation in Iran by NORINCO and five other PRC entities, although the State Department reportedly had considered

⁴⁰ John Bolton, Under Secretary of State for Arms Control and International Security, “Coordinated Allied Approaches to China,” Tokyo, Japan, February 7, 2005.

the sanctions since April 2005.⁴¹ New sanctions were imposed on previously sanctioned PRC entities on June 13, 2006, and later. (See **Table 1** for the full list of sanctions.)

In April 2007, the United States imposed sanctions on PRC entities for transfers contributing to weapons proliferation in Iran. The DNI's "Section 721 report" told Congress that PRC "entities" continued through 2008 to supply ballistic missile-related items to Iran. The report also said that PRC entities, over the years, have provided missile-related assistance to Iran that helped it to advance toward self-sufficient production of ballistic missiles. In 2008, the United States reportedly raised concern with China about a transfer to Iran of 208 tons of potassium perchlorate, which could be useful for missile fuel. Also in 2008, the Advanced Technology and Materials Company in Beijing and a PRC intermediary named Liaoning Industry and Trade Company reportedly sold to Iran large amounts of tungsten copper, and the United Arab Emirates intercepted a PRC shipment to Iran of specialized aluminum sheets, materials that could be applied to produce ballistic missiles. Moreover, LIMMT Economic and Trade Company and its executive, Li Fangwei, used front companies to hide sales of materials to Iran from 2006 to 2008, alleged an indictment in New York.⁴²

Obama Administration

In February and April 2009 and July 2010, the United States imposed sanctions on PRC entities and Li Fangwei for missile proliferation in Iran. Also, in July 2009, the State Department reportedly had concerns that Q.C. Chen (a PRC person previously sanctioned for weapons proliferation) arranged for the sale of a test chamber to Iran's Defense Industries Organization that could be useful for testing missile parts. The test chamber was made by Voetsch China (a PRC subsidiary of a German firm) and was not controlled by the MTCR.⁴³

Chemical Sales to Iran

Concerning chemical weapons, the *Washington Post* of March 8, 1996, reported that U.S. intelligence, for over one year, was monitoring transfers of precursor chemicals and chemical-related equipment from China to Iranian organizations affiliated with the military or the Revolutionary Guards. According to the report, the equipment included glass-lined vessels for mixing the caustic precursors and special air filtration equipment to prevent poison gas leaks. Iran was also reportedly buying PRC technology for indigenous and independent production.

Confirming long-suspected PRC transfers, on May 21, 1997, the Clinton Administration imposed sanctions on two PRC companies, five PRC citizens, and a Hong Kong company for transfers to Iran contributing to chemical weapon proliferation. U.S. sanctions, banning U.S. government procurement and imports, were imposed under the AECA and EAA, as amended by the Chemical and Biological Weapons Control and Warfare Elimination Act of 1991 (P.L. 102-182). However, the Administration did not impose sanctions under the Iran-Iraq Arms Nonproliferation Act of 1992 (affecting "persons" or "countries"), because the transfers apparently occurred before

⁴¹ Bill Gertz, "U.S. Puts Sanctions on Chinese Firms for Aiding Tehran," *Washington Times*, December 27, 2005.

⁴² Glenn Simpson and Jay Solomon, "Fresh Clues of Iranian Nuclear Intrigue," *Wall Street Journal*, January 16, 2009; John Eligon and William Broad, "Indictment Says Banned Materials sold to Iran," *New York Times*, April 8, 2009; Gordon Rayner, "Chinese Weapons Fall into Hands of Insurgents," *Telegraph*, February 5, 2011.

⁴³ "Inside the Ring," *Washington Times*, February 3, 2011.

February 10, 1996, the date when provisions on WMD proliferation took effect, as amended by the FY1996 National Defense Authorization Act (P.L. 104-106). Also, the State Department said that it had no evidence that the PRC or Hong Kong governments were involved.

An intelligence report was said to allege that China completed in June 1997 a plant in Iran for making glass-lined equipment used in producing chemical weapons, reported the *Washington Times* (October 30, 1997). The Nanjing Chemical and Industrial Group built the factory, and North Chemical Industries Corporation (NOCINCO) brokered the deal. (NOCINCO is affiliated with NORINCO, a defense-industrial firm.) However, the PRC government reportedly held up supplies of raw materials. The *London Daily Telegraph* (May 24, 1998) reported that SinoChem Corp.'s branch in Tianjin, China, supplied to Iran 500 tons of phosphorus pentasulphide (controlled by the AG for making nerve agents).

On June 14, 2001, the Bush Administration imposed sanctions under the Iran Nonproliferation Act of 2000 on Jiangsu Yongli Chemicals and Technology Import and Export Corporation (one of the two PRC companies sanctioned in 1997) for proliferation of chemical weapons-related materials or equipment to Iran. According to the *Washington Times* (June 28, 2001), the PRC company helped Iran to build a factory to manufacture dual-use equipment applicable to chemical weapons. Again, on January 16, 2002, the Administration imposed similar sanctions (for transfers of chemical and/or biological items controlled by the Australia Group) on Liyang Chemical Equipment Company, China Machinery and Electric Equipment Import and Export Company, and a PRC citizen (Chen Qingchang, or Q.C. Chen). Chen was also sanctioned in 1997. Sanctions were imposed for two years, but there was no economic effect because of the absence of U.S. government contracts, assistance, arms sales, or dual-use exports with/to such "persons."

With those actions, the State Department did not impose sanctions under the AECA, EAA, or the Iran-Iraq Arms Nonproliferation Act, apparently because unlike those laws, the Iran Nonproliferation Act requires semi-annual reports to Congress and authorizes sanctions based on "credible information" that a person, since 1999, transferred to Iran items controlled by multilateral export control lists (NSG, MTCR, AG, CWC, or Wassenaar Arrangement). The Administration again imposed sanctions under the Iran Nonproliferation Act on May 9, 2002, and a presidential report to Congress in June 2002 confirmed that five of the eight PRC entities were sanctioned for transferring AG-controlled items to Iran.⁴⁴ The *Washington Times* (May 20, 2002) said that the transfers involved anti-corrosive glass-lined equipment to make chemical weapons and that NORINCO was sanctioned but not listed among the eight publicly named PRC entities.

On July 9, 2002, the Bush Administration imposed sanctions under the Iran-Iraq Arms Nonproliferation Act of 1992 (in the first use of this law), as well as the AECA and EAA (as amended by the Chemical and Biological Weapons Control and Warfare Elimination Act of 1991), on eight PRC entities (including those previously sanctioned) for "knowingly and materially" contributing to Iran's chemical weapons program, according to the State Department. The Administration did not impose sanctions under the Iran-Iraq Act on the PRC government. The *Washington Times* (July 19, 2002) reported that the transfers took place between September 2000 and October 2001.

⁴⁴ President George W. Bush, *Report to Congress on the Emergency Regarding Proliferation of Weapons of Mass Destruction*, June 18, 2002.

On November 24, 2004, the Bush Administration again imposed sanctions under the Iran Nonproliferation Act that affected four PRC entities, including Q.C. Chen, likely related to chemical weapons. On December 23, 2005, the Administration again imposed sanctions for missile and chemical weapon (CW)-related proliferation in Iran by NORINCO and five other PRC entities, although the State Department reportedly had considered the sanctions since April 2005.⁴⁵ The DNI's unclassified "Section 721 report" of May 2007 told Congress that PRC "firms" continued in 2005 to provide dual-use chemical production equipment and technology to Iran. The United States had concerns in April 2008 that China Northern Chemical and Minerals Company shipped a chemical, sodium sulfide, to Iran, but the PRC claimed that the shipment went to Armenia, reported the *Washington Times* on February 3, 2011.

North Korea's Missile and Nuclear Weapons Programs

Suspected Missile Supplies

Since 1998, there have been public reports about and U.S. government confirmation of PRC assistance to North Korea's missile program. There were questions about whether the PRC had interests in North Korea's missile advances. Lieutenant General Xiong Guangkai, a Deputy Chief of General Staff of the People's Liberation Army (PLA), visited North Korea in early August 1998, before the surprising launch of a medium-range Taepo Dong-1 missile on August 31, 1998. However, increased worries about North Korea's missile program spurred U.S. and Japanese support for missile defenses opposed by China. Some said PRC entities acted on their own.

The National Security Agency (NSA) reportedly suspected in late 1998 that the China Academy of Launch Vehicle Technology (CALT) was working with North Korea on its space program (closely related to missiles) to develop satellites, but that cooperation was not confirmed to be linked to the Taepo Dong-1 MRBM program, said the *Washington Times* (February 23, 1999). An NSA report dated March 8, 1999, suggested that China sold specialty steel for use in North Korea's missile program, reported the *Washington Times* (April 15, 1999). In June 1999, U.S. intelligence reportedly found that PRC entities transferred accelerometers, gyroscopes, and precision grinding machinery to North Korea, according to the *Washington Times* (July 20, 1999). An October 20, 1999, classified report said that China's Changda Corp. sought to buy Russian gyroscopes that were more of the same that China supplied to the North Korean missile program earlier that year, reported the *Washington Times* (November 19, 1999). In December 1999, the NSA discovered an alleged PRC deal to supply unspecified PRC-made missile-related items to North Korea through a Hong Kong company, said the *Washington Times* (January 1, 2000).

The DCI first publicly confirmed PRC supplies to North Korea in July 1999. The DCI's April 2003 "Section 721 report" said that, in the first half of 2002, North Korea continued to procure missile-related raw materials and components from foreign sources, but it dropped a previous reference about those foreign supplies as especially going through North Korean firms in China. There are direct implications for U.S. national security, because of North Korea's nuclear weapons and nuclear programs as well as delivery systems. PRC technology transfers have further implications for secondary, or retransferred, proliferation, since North Korea reportedly has supplied technology to Iran, Syria, Pakistan, Egypt, Libya, and Yemen. The DNI's

⁴⁵ Bill Gertz, "U.S. Puts Sanctions on Chinese Firms for Aiding Tehran," *Washington Times*, December 27, 2005.

unclassified “Section 721 report” of May 2007 told Congress that PRC “entities” continued in 2005 to assist North Korea’s ballistic missile program.

There were indications that some sensitive exports from China continued to North Korea. Taiwan raided in July 2010 Ho Li Enterprises that received orders since March 2007 from Dandong Fang Lian Trading Company in Dandong, PRC, with an alleged association with the DPRK’s military, for two dual-use, high-technology machine tools that ended up in North Korea earlier in 2010.⁴⁶

Secret Nuclear Programs

A serious case of such secondary proliferation involves North Korea’s secret program to enrich uranium to develop nuclear weapons, a program that U.S. officials said was surprisingly acknowledged by North Korea to visiting Assistant Secretary of State James Kelly during talks in Pyongyang on October 4, 2002. This acknowledgment was not publicly disclosed by the Bush Administration until October 16, 2002, at a time when President Bush sought congressional authorization for the war against Iraq. By early 2007, however, U.S. officials restated the assessment of the highly enriched uranium (HEU) program.

The DCI’s April 2003 “Section 721 report” stated that the United States was suspicious of an uranium enrichment program in North Korea for “several years” but did not obtain “clear evidence indicating that North Korea had begun constructing a centrifuge facility until recently.” While the DCI previously reported that North Korea has another program using plutonium that produced one or two nuclear weapons, the *Washington Post* reported on April 28, 2004, that U.S. intelligence newly estimated that North Korea has at least eight nuclear weapons.

DCI George Tenet testified to the Senate Intelligence Committee on February 24, 2004, that U.S. intelligence judged in the mid-1990s that North Korea had produced “one, possibly two, nuclear weapons” and the 8,000 fuel rods that North Korea claims to have reprocessed into plutonium metal would provide enough plutonium for “several more.” On February 16, 2005, the Director of the Defense Intelligence Agency, Vice Admiral Lowell Jacoby, testified that North Korea’s Taepo Dong 2 intercontinental ballistic missile, which might be ready for testing, “could deliver a nuclear warhead to parts of the United States in a two-stage variant and target all of North America with a three-stage variant.” However, a test of that missile failed in July 2006.

This case raised a question about whether China’s nuclear technology indirectly contributed to North Korea’s nuclear weapons program through Pakistan, since China was the “principal supplier” to Pakistan’s nuclear weapons program. There are also questions about China’s knowledge about the Pakistani-North Korean trade and whether Beijing has shared useful intelligence with the United States.

The *New York Times* and *Washington Post* reported on October 18, 2002, that U.S. officials believed Pakistan provided equipment, including gas centrifuges, for the North Korean uranium enrichment program, in return for North Korea’s supply of Nodong MRBMs to Pakistan by 1998. The *Washington Post* added on November 13, 2002, that the Bush Administration had knowledge that Pakistan continued to provide nuclear technology to North Korea through the summer of 2002. Henry Sokolski of the Nonproliferation Policy Education Center wrote in *National Review Online* (November 19, 2002) that “one might call on Pakistan, Russia, and China to detail what

⁴⁶ *Associated Press* and *Kyodo*, September 7, 2010.

nuclear technology and hardware they allowed North Korea to import.” John Tkacik of the Heritage Foundation wrote in the *Asian Wall Street Journal* (December 2, 2002) that most in the U.S. intelligence community doubted China was “completely in the dark,” as PRC leader Jiang Zemin claimed at his summit with President Bush at Crawford, TX, on October 25, 2002.

The *New York Times* reported on January 4, 2004, about a history of nuclear technology proliferating from Pakistan’s Khan Research Laboratories headed by Abdul Qadeer Khan and disclosed that he had transferred designs for uranium-enrichment centrifuges to China first. DCI George Tenet confirmed to the Senate Intelligence Committee on February 24, that North Korea pursued a “production-scale uranium enrichment program based on technology provided by A.Q. Khan.” Particularly troubling was the reported intelligence finding in early 2004 that Khan sold Libya a nuclear bomb design that he received from China in the early 1980s (in return for giving China centrifuge technology), a design that China already tested in 1966 and developed as a compact nuclear bomb for delivery on a missile.⁴⁷ That finding raised an additional question of whether Khan also sold that bomb design to others, including Iran and North Korea.

Moreover, PRC firms could have been involved directly or indirectly in North Korea’s nuclear weapons programs or weapons proliferation to other countries. In June 1999, authorities in India inspected the North Korean freighter *Kuwolsan* and found an assembly line for Scud ballistic missiles intended for Libya, including many parts and machines from China or Japan, according to the *Washington Post* (August 14, 2003). The *Washington Times* reported on December 9 and 17, 2002, that a PRC company in the northeastern coastal city of Dalian sold to North Korea 20 tons of tributyl phosphate (TBP), a dual-use chemical that U.S. intelligence reportedly believed would be used in the North Korean nuclear weapons program.

PRC Ports and Airspace

Questions have arisen about China’s role in allowing Pakistani, North Korean, and Iranian ships and planes to use PRC ports and airspace (and perhaps military airfields). China’s possible cooperation in interdiction, restrictions in the use of its ports and airfields, law-enforcement, and intelligence-sharing has become a salient question in light of the Bush Administration’s Proliferation Security Initiative (PSI) announced in May 2003 (which China did not join). As part of the military trade between Pakistan and North Korea, in July 2002, Pakistan flew a C-130 transport aircraft to pick up missile parts in North Korea, reported the *New York Times* (November 24, 2002). In December 2002, the Spanish and U.S. navies interdicted a North Korean ship (*So San*) with Scud missiles bound for Yemen, and the Spanish Defense Minister reported that the ship’s last port of call was in China. In addition, an Iranian ship stopped at the Tianjin port in China and picked up missile components before sailing on to North Korea to take delivery of missiles and rocket fuel in February and November 2002, reported the South Korean newspaper, *Joong Ang Ilbo* (December 19, 2002). From April to July 2003, China reportedly gave overflight rights to Iranian Il-76 cargo planes that flew to North Korea at least six times to pick up wooden crates suspected of containing cruise missiles, and the Bush Administration lodged a diplomatic protest with Beijing, reported *Time (Asian edition)* on July 14, 2003. At a hearing held by the Senate Foreign Relations Committee on September 11, 2003, on U.S.-China relations, Assistant Secretary of State James Kelly confirmed to Senator Russell Feingold that the State Department

⁴⁷ Joby Warrick and Peter Slevin, “Libyan Arms Designs Traced Back to China,” *Washington Post*, February 15, 2004; William Broad and David Sanger, “As Nuclear Secrets Emerge in Khan Inquiry, More Are Suspected,” *New York Times*, December 26, 2004.

raised with China the problem of North Korean planes flying through PRC airspace or making refueling stops in China.

Then, in June 2005, China (and a Central Asian country) agreed to deny over-flight rights to an Iranian cargo plane that had landed in North Korea allegedly to pick up missile components. In November 2007, the Bush Administration reportedly raised concerns with China that an Iran Air plane was flying from North Korea via Beijing's airport to Iran with a shipment of missile jet vanes for Iran's missile program. In August 2008, India denied use of its airspace to a North Korean plane that stopped in Burma and was scheduled to fly on to Iran with suspected cargo related to weapons proliferation.⁴⁸ Such incidents raised the question of whether China allowed overflight by planes from North Korea, had knowledge of their cargo, or shared intelligence with the U.N., United States, or other countries.

After North Korea's second nuclear test in May 2009 and the UNSC applied sanctions under Resolution 1874, the United Arab Emirates, in August 2009, seized a ship ("ANL Australia") transporting North Korean weapons to Iran. However, after originating in North Korea, the cargo was first transferred in June to a PRC ship that docked at China's port cities of Dalian and Shanghai, where the cargo was then moved to the "ANL Australia" ship.⁴⁹ Then, in December 2009, a plane carrying weapons in contravention of U.N. sanctions headed from North Korea for Sri Lanka and other countries, with the North Korean weapons bound for Iran. The Thai air force seized the Il-76 plane, when it landed in Bangkok to refuel. In November 2009, South Africa seized North Korea's weapons cargo bound for Congo, in violation of UNSC Resolution 1874, and the shipment was first loaded onto a ship docked in Dalian. China's port of Dalian, close to North Korea's port of Nampo, has been one of the critical transshipment points in China for North Korea's cargo.⁵⁰ China apparently has not seized such arms shipments.

Military Relationship

Relevant questions have arisen about the PRC's military relationship with the DPRK, including any PLA contingency planning in the event of a crisis or collapse in North Korea. A related issue has been whether the U.S. military should pursue talks on contingencies with the PLA as well as U.S. allies. Another key question has been about the PLA's knowledge of the DPRK's missile and nuclear programs, and willingness to share information with the United States and U.S. allies. As discussed in this report, the PRC and DPRK militaries had high-level contact just before the missile tests of August 1998 and July 2006. Moreover, this relationship has raised questions about China's effectiveness in using leverage with the power-holders in Pyongyang. When asked on October 14, 2009, whether the United States and China discussed contingencies in North Korea, Assistant Secretary of State Kurt Campbell acknowledged talks about "every" aspect. However, a professor at Peking University and a close observer of PRC policies, Wang Jisi, said in Seoul in February 2010, that Beijing would find it difficult to accept a political implosion in Pyongyang or passively watching if other countries gain political and military control in North Korea.⁵¹

⁴⁸ *New York Times*, October 24, 2005; Jay Solomon, Krishna Pokharel, and Peter Wonacott, "North Korean Plane Was Grounded at U.S. Request," *Wall Street Journal*, November 1, 2008; John Pomfret, "U.S. Asked China to Keep Missile Parts from Iran," *Washington Post*, November 29, 2010.

⁴⁹ *Financial Times*, August 28, 2009; *Yonhap*, September 10, 2009; *Washington Post*, December 3, 2009.

⁵⁰ *Reuters*, December 13, 2009; *Wall Street Journal*, December 22, 2009; *Yomiuri Shimbun*, January 10, 2010; *Reuters*, February 22, 2010; *AFP*, February 25, 2010; *Chosun Ilbo*, March 10, 2010; *Asahi Shimbun*, July 20, 2010.

⁵¹ Quoted in *Korea Herald*, February 24, 2010.

Indeed, China seems to have used the military relationship to signal pressure on North Korea to negotiate as well as support to buttress the DPRK regime that otherwise would face international isolation. In mid-August 2003, *Wen Wei Po* (a PRC-owned newspaper in Hong Kong) published an article questioning whether the PRC-North Korean alliance under the 1961 Treaty of Friendship, Cooperation, and Mutual Assistance continued to serve China's interest. China took steps that appeared to pressure North Korea, including using the PLA. In early September 2003, China replaced paramilitary People's Armed Police (PAP) troops with PLA soldiers along its border with North Korea, as confirmed by the PRC Foreign Ministry and the official *People's Daily* (September 16, 2003), apparently to warn North Korea against provocations to raise tensions. Reports in 2006 confirmed the PLA's construction of fencing along the border, although that construction reportedly had started in 2003. The Defense Department's 2004 report to Congress on PRC military power skeptically critiqued that China "avoided taking real steps to pressure North Korea." Nonetheless, the report confirmed that "as a potential hedge against uncertainty, the PLA assumed responsibility for border security along the northeast frontier in fall 2003, increasing security along the porous border with North Korea and strengthening China's ability to stem refugee flows or respond to a breakdown of the North Korean regime."⁵²

China has pursued military contacts with the United States (Secretary of Defense Donald Rumsfeld visited Beijing in October 2005), even while China's traditional military friendship with North Korea showed greater candor. When PRC ruler Hu Jintao visited Pyongyang in October 2005 and Kim Jong-il visited China in January 2006, PRC media downplayed Hu's third position as Chairman of the Central Military Commission (CMC) (in addition to other positions as Communist Party General-Secretary and PRC President). On March 9, 2006, General B.B. Bell, Commander of U.S. Forces Korea, testified to the House Armed Services Committee that PRC-North Korean military engagement was "quite low" and that despite the friendship treaty, "the amount of military support that the PRC provides to the North is minimal." The PLA hosted the May 2006 visit of Admiral William Fallon, Commander of the Pacific Command, to the Shenyang Military Region (close to the border with North Korea).

PRC Defense Minister and CMC Vice Chairman Cao Gangchuan visited North Korea in April 2006 for three days. But he did not get an audience with Kim Jong-il, raised the controversy of the DPRK's nuclear program, and then visited South Korea for five days in the same month. Just months after General Cao's visit, Pyongyang tested a Taepo Dong-2 missile in July 2006 and a nuclear device in October 2006. When the top PLA officer and another CMC Vice Chairman, General Guo Boxiong, visited Washington in July 2006, he criticized North Korea's July 4 missile test, even citing the UNSC's Resolution that condemned the test. Further indicating strains, on the day after the DPRK's nuclear test on October 9, 2006, the PRC Foreign Ministry publicly said that the test had a "negative impact" on PRC-DPRK ties and denied that China was North Korea's "ally." A PRC-owned newspaper in Hong Kong reported that PLA and PAP troops were on high alert at the PRC-DPRK border.⁵³ On October 16, the PLA commemorated the death of a soldier who was killed by North Korean soldiers a year earlier.⁵⁴

However, following Pyongyang's second nuclear test in May 2009, PRC Defense Minister Liang Guanglie visited North Korea for five days on November 22-27. General Liang reportedly recalled that he was a veteran of the Korean War in which PRC-DPRK friendship was "sealed in

⁵² Defense Department, "Report on PRC Military Power," May 29, 2004.

⁵³ *Wen Wei Po*, October 13, 2006.

⁵⁴ *South China Morning Post*, October 17, 2006.

blood.” He met with Kim Jong-il but did not mention North Korea’s nuclear program or denuclearization, in contrast to reporting of Defense Minister Cao’s visit in 2006.

After South Korea announced on May 20, 2010, an international finding that North Korea attacked South Korea’s naval ship, Cheonan, on March 26, killing 46 sailors, CMC Vice Chairman Guo Boxiong visited the Shenyang Military Region apparently in early June, including its troops at the border with North Korea. In July, the PLA also “opposed” U.S.-ROK maritime exercises in the Yellow Sea, seemingly supporting the DPRK which was the target of the exercises to enhance deterrence and defense. In August, the PRC Executive Vice Minister of Public Security Liu Jing visited North Korea to hold talks and donate equipment to the Ministry of People’s Security which was identified as under the National Defense Commission.

Trilateral and Six-Party Talks in Beijing

Overview and PRC Policy

After the Bush Administration’s October 2002 disclosure about North Korea’s ongoing nuclear weapons programs, it sought a multilateral effort (not just bilateral negotiations) to achieve the complete, verifiable, and irreversible dismantlement (CVID) (not just a freeze) of North Korea’s nuclear weapons programs (uranium and plutonium programs) as well as nuclear weapons. The Administration’s strategy relied on securing China’s cooperation and central role. At the October 25, 2002, summit in Crawford, TX, top PRC ruler Jiang Zemin agreed with President Bush on the goal of a nuclear-free Korean peninsula achieved through a peaceful resolution, although Jiang claimed to be “completely in the dark” about North Korea’s nuclear weapons.

However, some have questioned whether China has been helpful in fully using its leverage with North Korea, whether it seeks North Korea’s denuclearization with as much urgency as the United States and its allies, and whether China’s role warrants a closer U.S.-PRC relationship that might risk other U.S. interests. China has its own concerns that include: (1) sustainment of a “friendly” U.S. approach toward China; (2) U.S. security policies (suspected of provoking instability and collapse of the North Korean regime, with loss of a perceived buffer between PLA and U.S. forces); (3) diminished global standing in any appearances of isolated PRC influence; (4) whether Beijing’s support for Washington would result—directly or indirectly—in limits to U.S. support for Taiwan, including arms sales; (5) U.S. alliances with Japan and South Korea; (6) a stronger Japan (with missile defense and even possibly nuclear weapons); (7) stability and PRC economic and political influence in North Korea; and (8) a strong, unified Korea.

China initially did not respond to multilateral cooperation with the urgency and to the extent sought by the United States. Then, North Korea further escalated the situation by expelling IAEA inspectors and reactivating its nuclear reactor at Yongbyon in December 2002, and by withdrawing from the NPT in January 2003. On February 7, 2003, Bush said he had to “remind” Jiang of “joint responsibilities” in achieving common objectives concerning North Korea. Two days later, Secretary of State Colin Powell said in an interview on *Fox News Sunday* that China has “considerable influence with North Korea.” Powell reported that North Korea depends on China for 80 percent of its energy and economic activity, and urged China to play an active role in the dispute. While in Beijing on February 24, 2003, Secretary Powell noted that “the United States and China share the goal of a diplomatic and peaceful resolution to this problem. It cannot

simply be treated, however, as a bilateral matter between the United States and North Korea.”⁵⁵ Later, in November, Powell said that after he had pressed the need for China to “rise to its responsibilities in dealing with this regional problem,” PRC Vice Premier Qian Qichen made an “important contribution” in March 2003 by delivering the message in North Korea that “there would be no alternative to multilateral talks” that involved China and other countries.⁵⁶

Starting in 2003, as North Korea further exacerbated the security situation, China’s stance shifted to sponsor multilateral talks to denuclearize the Korean peninsula, to be openly critical of North Korea, and to support tough UNSC resolutions that condemned the July 2006 missile firings and that imposed sanctions for the October 2006 nuclear test by the DPRK. However, the PRC also urged the United States to provide aid to North Korea, to lift sanctions, to hold bilateral U.S.-DPRK talks by 2007 (even outside of Beijing), and to show flexibility for a final settlement. While skeptics pointed to progress as limited to the *process* of the Beijing-sponsored talks, there appeared some initial progress in *results* by the summer of 2007, with the shutdown of North Korea’s Yongbyon nuclear reactor. Nonetheless, in spite of the PRC’s role in sponsoring negotiations with and supporting North Korea, its “isolated” position in multilateral negotiations, and the seeming fragility of the health of the North Korean ruler and economy, the North Korean regime has been able to retain: time to stall denuclearization, diplomatic leverage, economic gains, repression of its people, ability to proliferate weapons technology, and capability for a second nuclear test in May 2009. By then, China’s role came under greater criticism.

Trilateral Talks (April 2003)

After the PRC’s pressure on North Korea in March 2003, China hosted the Trilateral Talks among China, the Democratic People’s Republic of Korea (DPRK), and the United States on April 23-25, 2003. Secretary Powell noted positively that “China has stepped up.” However, the DCI’s “Section 721 report” (of November 2004) confirmed that, at the meeting, North Korea threatened to “transfer” or “demonstrate” its nuclear weapons. On June 9, 2003, in Tokyo, Deputy Secretary of State Richard Armitage “saluted” China’s cooperation on the problem of North Korea and declared “a new phase of our relationship with China.” In mid-July 2003, PRC leader Hu Jintao dispatched Deputy Foreign Minister Dai Bingguo to Pyongyang with a letter for Kim Jong-il that proposed a multilateral meeting with U.S.-North Korean talks on the sidelines, reported the *New York Times* (July 16, 2003).

1st Round of Six-Party Talks (August 2003)

Responding to U.S. insistence on expanded multilateral talks, China hosted the first round of the Six-Party Talks (also including South Korea, Japan, and Russia) on August 27-29, 2003. However, North Korea again threatened to transfer or test a nuclear weapon, as confirmed by the DCI’s “Section 721 report” of November 2004.

China seized a shipment of tributyl phosphate (TBP), a material used for nuclear weapons, suspected by the CIA on a train bound for North Korea in the summer of 2003, reported *Asahi Shimbun* (February 22, 2004). The DCI’s “Section 721 report” confirmed that, in September

⁵⁵ Department of State, “Secretary Colin L. Powell’s press conference,” Beijing, China, February 24, 2003.

⁵⁶ Department of State, “Secretary of State Colin L. Powell’s Remarks at Conference on China-U.S. Relations,” College Station, Texas, November 5, 2003.

2003, at the border with North Korea, China stopped a shipment of chemicals that could have been used in the DPRK's nuclear program.

2nd Round (February 2004)

The Administration sought another round of multilateral talks before the end of 2003, with a tentative date set by November for around December 17,⁵⁷ but the talks were not held then. When PRC Premier Wen Jiabao visited President Bush at the White House on December 9, 2003, the Taiwan question eclipsed the issue of North Korea. The *Washington Post* disclosed on January 7, 2004, that at a meeting in Seoul the week before, a PRC diplomat, Fu Ying, questioned the credibility of U.S. intelligence that Pyongyang has a highly enriched uranium program.

China then hosted the second round of Six-Party Talks on February 25-28, 2004, for which Assistant Secretary of State James Kelly expressed appreciation. However, North Korea reportedly denied the suspected uranium enrichment program. The State Department's statement at the end of the talks did not report any progress in either freezing or dismantling North Korea's nuclear weapons programs, but rather pointed to "progress on a regularized process" for peacefully resolving this issue.

3rd Round (June 2004)

Before China hosted another round of Six-Party Talks, PRC Deputy Foreign Minister Zhou Wenzhong publicly questioned the credibility of U.S. intelligence about North Korea's uranium enrichment program and expressed support for North Korea's arguments (in an interview with the *New York Times*, June 9, 2004). China hosted the third round of Six-Party Talks on June 23-26, 2004. The DPRK again threatened to test a nuclear weapon. Afterward, National Security Adviser Condoleezza Rice traveled to Beijing and told Central Military Commission (CMC) Chairman Jiang Zemin and President Hu Jintao that "A.Q. Khan was not engaged in academic research" and that "North Korea has a highly enriched uranium program," reported the *Washington Times* on July 14, 2004. Also visiting Beijing in July 2004, North Korea's National Defense Commission Member and Defense Minister Kim Il-chol met with CMC Vice Chairman and Defense Minister Cao Gangchuan, and they could have discussed the PLA's provision of aid.

Despite the lack of any breakthrough in the Trilateral Talks and three rounds of Six-Party Talks held since April 2003, Assistant Secretary of State James Kelly contended at a hearing of the Senate Foreign Relations Committee in July 2004 that multilateral diplomacy has been useful and that the talks held in Beijing have yielded progress in dealing with the threat of North Korean nuclear weapons.⁵⁸ In answer to Senator Chuck Hagel, Kelly acknowledged that "there could be and probably should be a role for the United Nations Security Council (UNSC)," but reported that China likely will not be interested in dealing with the threat at the UNSC. In answer to Senator Lincoln Chaffee, Kelly denied that China linked cooperation on North Korea to U.S. concessions on Taiwan (including arms sales), by saying that China did not pose Taiwan "as a tactical issue" in discussions about North Korea. Kelly acknowledged to Senator Bill Nelson that it remained unclear as to whether China's preference for positive incentives (over pressure) will work.

⁵⁷ *Kyodo News*, November 24, 2003.

⁵⁸ Senate Foreign Relations Committee, hearing, *A Report on Latest Round of Six-Way Talks Regarding Nuclear Weapons in North Korea*, July 15, 2004.

The six countries had agreed to convene a fourth round of talks by the end of September 2004, but that time period passed without another such meeting. As indicated in his press conference in Beijing on October 25, 2004, Secretary of State Powell continued to count on China's "considerable influence with North Korea."

In early February 2005, President Bush sent Michael Green, the National Security Council's Senior Director for Asian Affairs to Beijing, Tokyo, and Seoul to intensify diplomatic pressure on Pyongyang. In Beijing, Green met with President Hu Jintao and presented urgent U.S. intelligence findings that North Korea had processed several tons of uranium hexafluoride (which could be enriched to make nuclear bombs) and sold some to Libya perhaps in early 2003.⁵⁹ Other reports, however, pointed to intelligence findings that the material originated in North Korea but that Pakistan bought the uranium hexafluoride and supplied it to Libya.⁶⁰

Suspension of Six-Party Talks

On February 10, 2005, North Korea again escalated tensions by announcing that it would indefinitely suspend its participation in the Six-Party Talks and that it had manufactured nuclear weapons. North Korea's announcement further called into question China's preference for positive inducements and raised the issue of using sanctions to pressure Pyongyang, including consideration of action by the UNSC. A week after North Korea's announcement, South Korea's ambassador to Beijing urged China to use its leverage, pointing out that in addition to economic assistance (food, fuel, and investments), North Korea imports 70-80 percent of its foreign goods from China and that China permits several railways and 15 roads to operate at the North Korean border.⁶¹ Instead, China's Foreign Ministry contended at a news conference on February 17 that sanctions and pressure would only complicate the situation (a position that Foreign Minister Li Zhaoxing argued to Secretary of State Rice on February 12). China also pointed to North Korea and the United States as the two key parties to hold bilateral talks.

Wang Jiarui, Director of the International Liaison Department of the Communist Party of China, visited Pyongyang on February 19-22, 2005, and personally passed a plea from Hu Jintao to Kim Jong-il about resuming the Six-Party Talks. At the same time, to China's great displeasure, the U.S. Secretaries of Defense and State issued a Joint Statement ("2+2 Statement") along with the visiting Japanese Ministers of Defense and Foreign Affairs that included "the peaceful resolution of issues concerning the Taiwan Strait through dialogue" as a common strategic objective.⁶² At a press conference on March 6, 2005, Foreign Minister Li Zhaoxing characterized China's role as just "facilitating" the Six-Party Talks.

The Administration then stepped up pressure on the PRC to use its leverage to bring North Korea back to the talks. On March 21, 2005, Secretary of State Rice met with top PRC officials including President Hu in Beijing, after visiting other Asian capitals. She urged China in particular to help restart the Six-Party Talks, publicly saying that "China has the closest relationship with North Korea," that "it is not a U.S.-North Korean issue," and that "there are

⁵⁹ David Sanger and William Broad, "Tests Said to Tie Deal on Uranium to North Korea" and "U.S. Asking China to Press North Korea to End its Nuclear Program," *New York Times*, February 2 and 9, 2005.

⁶⁰ Glenn Kessler and Dafna Linzer, "Nuclear Evidence Could Point to Pakistan," *Washington Post*, February 3, 2005; Dafna Linzer, "U.S. Mised Allies About Nuclear Export," *Washington Post*, March 20, 2005.

⁶¹ *Chosun Ilbo*, Seoul, February 18, 2005.

⁶² Department of State, "Joint Statement of the U.S.-Japan Security Consultative Committee," February 19, 2005.

other options in the international system.”⁶³ In Beijing on April 26, 2005, Assistant Secretary of State Chris Hill reportedly raised the idea of an interruption of oil flows from China to North Korea, but China refused.⁶⁴ At a news conference on April 28, President Bush reminded China about his agreement with Jiang Zemin and mentioned Secretary Rice’s option of going to the U.N. Security Council (where China has veto power). A PRC Foreign Ministry official, Yang Xiyu, publicly blamed Washington for a “lack of cooperation” and Bush for calling Kim Jong-il a “tyrant” at the news conference.⁶⁵ Chris Hill, at a congressional hearing on May 26, said that China has “enough influence” to convince North Korea to return to the talks but has not done it. He also made China accountable for any failure of the Six-Party Talks if it fails to get its “very close friend” back to the talks.⁶⁶

Meanwhile, Secretary Rice also offered a strengthened U.S.-PRC relationship and agreed that Deputy Secretary of State Robert Zoellick would hold the first “Senior Dialogue” with his PRC counterpart, a meeting which was scheduled for early August 2005. PRC ruler Hu Jintao had requested what China calls “strategic talks” when he met with President Bush in November 2004.⁶⁷ One day after North Korea announced on July 9 that it would return to the talks, Secretary Rice visited China, but this time before visiting U.S. allies (Thailand, Japan, and South Korea).⁶⁸

4th Round and Joint Statement (July-September 2005)

After a period of 13 months without talks, China announced the start of the fourth round of the Six-Party Talks in Beijing on July 26, 2005, and described China’s role as both a “host” to “facilitate” the talks and a “participant.” The inconclusive first phase of this round ended on August 7, 2005, when the countries agreed to recess and resume talks on August 29. Pakistani President Pervez Musharraf provided support for U.S. reports of North Korea’s uranium enrichment program, when he said that A.Q. Khan supplied North Korea with centrifuges and their designs.⁶⁹ North Korea did not return to the talks as agreed but returned later on September 13. Meanwhile, President Bush agreed to a meeting at the White House with PRC ruler Hu Jintao in early September but had to postpone it because of Bush’s response to Hurricane Katrina. Bush then met with Hu in New York on September 13.

China proposed a joint statement that recognized North Korea’s insistence on a light water reactor and had no explicit mention of a uranium program. On September 17, PRC Vice Foreign Minister Dai Bingguo presented China’s draft as the “most realistic” and put pressure on the United States to agree to it.⁷⁰ Along with other countries, the United States agreed to sign the **Joint Statement of Principles (not an agreement) on September 19, 2005**, in which North Korea committed to

⁶³ Secretary Condoleezza Rice, “Remarks to the Press in China,” Beijing, March 21, 2005.

⁶⁴ Glenn Kessler, “China Rejected U.S. Suggestion to Cut Off Oil to Pressure North Korea,” *Washington Post*, May 7, 2005.

⁶⁵ Joseph Kahn, “China Says U.S. Impeded North Korea Arms Talks,” *New York Times*, May 13, 2005.

⁶⁶ House International Relations Subcommittee on Asia and the Pacific, hearing on Northeast Asia, May 26, 2005.

⁶⁷ Department of State, Daily Press Briefing, April 8, 2005; Deputy Secretary of State Robert Zoellick, “Remarks at U.S. Embassy Beijing,” August 2, 2005; and Glenn Kessler, “Zoellick Details Discussions With China on Future of the Korean Peninsula,” *Washington Post*, September 7, 2005.

⁶⁸ Secretary Condoleezza Rice, Press Availability in Beijing, July 10, 2005.

⁶⁹ *BBC*, August 24, 2005; and *New York Times*, September 13, 2005.

⁷⁰ *Xinhua [New China News Agency]*, September 17, 2005; and Joseph Khan and David Sanger, “U.S.-Korean Deal On Arms Leaves Key Points Open,” *New York Times*, September 20, 2005.

abandon “all nuclear weapons” and “existing nuclear programs” and to return to the NPT and IAEA safeguards; and the other countries agreed “to discuss, at an appropriate time, the subject of the provision of a light water reactor.” However, the United States had to clarify separately that dismantlement of nuclear weapons must be verifiable; that nuclear programs included plutonium and uranium programs; and that an “appropriate time” for “discussion” of a light water reactor is when North Korea has verifiably eliminated all nuclear weapons and all nuclear programs.⁷¹

At a hearing of the House International Relations Committee on October 6, 2005, Representative Ileana Ros-Lehtinen asked about PRC pressure to accept the deal. Assistant Secretary of State Chris Hill did not deny that Beijing exerted pressure and noted that there were earlier PRC drafts that were “absolutely unacceptable,” while the mention of a light water reactor was “not welcomed.” He testified, nonetheless, that the United States benefitted from China’s strong desire to reach a deal and “we can work well with the Chinese.” He also described China’s role as that of a “secretariat” (producing drafts), seemingly a neutral role.

5th Round (November 2005)

After the joint statement of September 2005 was signed, PRC Vice Premier Wu Yi traveled to North Korea on October 8-11, 2005, promising new economic aid. Top PRC leader Hu Jintao then followed with a visit on October 28-30 and attended a ceremony to sign economic agreements. On November 1, China announced that the next round would start on November 9. While there was progress in the *process*, when the meeting for the 5th round of the Six-Party Talks ended on November 11, no progress in *results* was announced for the implementation of the joint statement to dismantle North Korea’s nuclear weapons. Moreover, there continued to be differences between the U.S. and PRC approaches in continuing the Six-Party Talks. While President Bush called for “firm resolve” in a speech given in Kyoto, Japan, on November 16, 2005, the PRC’s Hu Jintao called for “greater flexibility” in a speech in Seoul the next day.

PRC Communist Party General-Secretary Hu Jintao hosted North Korean ruler Kim Jong-il in China on January 10-18, 2006, and Hu expressed support for the Six-Party Talks. The PRC proposed a meeting on January 18 in Beijing between Assistant Secretary of State Chris Hill and North Korean negotiator Kim Kye-gwan. China’s media said that PRC diplomat Wu Dawei “also joined” the implied U.S.-DPRK bilateral meeting (vs. the U.S. view of a three-nation meeting).

On February 3, 2006, Senators Harry Reid (Democratic Leader), Carl Levin (Ranking Democrat of the Armed Services Committee), Joseph Biden (Ranking Democrat of the Foreign Relations Committee), and John Rockefeller (Vice Chairman of the Intelligence Committee) wrote a letter to President Bush, saying that U.S. policy “still has not resulted in an elimination, freeze, or even a slowing of North Korea’s nuclear and ballistic missile activities.” At a hearing of the House International Relations Subcommittee on Asia and the Pacific on March 8, 2006, Chairman James Leach critiqued President Bush’s “reactive” approach to the Six-Party Talks that “appear moribund,” calling for U.S. leadership, “initiative” for more dialogue, “greater flexibility” for diplomacy, sending Assistant Secretary of State Chris Hill (the witness) to Pyongyang, negotiation of a permanent peace on the peninsula at a separate forum, direct contacts with North Koreans, and liaison offices to solve a “problem of communication.” Leach argued against

⁷¹ Department of State, “Joint Statement of the Fourth Round of the Six-Party Talks,” Beijing, and “North Korea—U.S. Statement,” New York City, September 19, 2005.

continuing to “transfer the initiative to others, indebting us to the diplomacy of countries that may have different interests or simply ensconcing the status quo.”

Indeed, despite its considerable influence, China’s balanced role placed its stance as more neutral than supportive of the United States and Japan. However, as Beijing pursued the “process” of the talks, results remained elusive. The burden increased on China’s preferred diplomacy to achieve the DPRK’s nuclear disarmament. The impasse also threatened to strain U.S.-PRC ties.

Missile Firings (July 2006)

The impasse continued into the summer of 2006, when China failed to prevent North Korea from test-firing seven ballistic missiles, including the first test of a Taepo Dong-2 ICBM under development with a range (perhaps 3,700 miles) that could reach Alaska.⁷² After the DPRK began preparations in May, Congress expressed concerns, including in a letter from Senators Carl Levin and Hillary Rodham Clinton to President Bush on June 15. At a hearing of the House Armed Services Committee on June 22, some Members asked about China’s role. Brigadier General John Allen, Principal Director for Asian and Pacific Affairs at the Office of the Secretary of Defense, testified that the PRC tried to dissuade North Korea from steps that would be destabilizing and run counter to the Six-Party Talks. However, the PRC’s use of leverage, including the PLA’s opposition or acquiescence to the DPRK’s missile program, was unclear. Indeed, there was high-level contact between the militaries of the PRC and DPRK shortly before the July 2006 missile tests, similar to that before the August 1998 missile firing. On June 21, 2006, the PLA Chief of General Staff, General Liang Guanglie, told a DPRK military visitor that the PLA will “expand cooperation” with the Korean People’s Army.

On July 4, 2006 (Washington time), North Korea fired a Taepo Dong-2 ICBM that failed in less than 40 seconds after launch and several short-range Scuds and medium-range Nodongs, bringing Washington’s condemnation for this “provocative act.” Threatened by the missiles, Japan called for Security Council action. The PRC’s less forceful reaction was to express “grave concern” about the “situation” and to call for “restraint” from all countries. On July 5, Senator John McCain stated that China and Russia have the most leverage over North Korea and warned that their posture will have a heavy impact on our relations.

In a phone call with President Bush on July 6, PRC ruler Hu Jintao expressed “deep concerns” about the “situation” but also warned against actions that might “aggravate the situation.”⁷³ On July 7, with U.S. support, Japan sponsored a UNSC resolution that invoked Chapter VII of the U.N. Charter (language for sanctions and/or force), but China countered with a non-binding statement by the president of the Security Council with no mention of Chapter VII. China’s draft statement of July 10 called for resuming the Six-Party Talks, preventing technology and financial transfers to North Korea’s missile and WMD programs, and other voluntary measures. Faced with this resistance from Beijing, Tokyo and Washington agreed on July 10 to postpone a vote on their draft resolution to give China time for a diplomatic mission.

⁷² In a radio interview on July 8, 2006, Secretary of Defense Donald Rumsfeld said that North Korea announced it has nuclear weapons and ballistic missiles, but it is uncertain whether North Korea has the ability to mate a nuclear weapon with a ballistic missile. Also, he said that North Korea has 3-5 more “Taepodong-2 airframes.”

⁷³ The official *China Daily*, July 7, 2006.

China sent a previously-scheduled delegation led by Vice Premier Hui Liangyu to Pyongyang on July 10-15 to commemorate the 45th anniversary of the bilateral friendship treaty, and Hui reportedly signed a new agreement on economic aid. But Kim Jong-il snubbed the PRC visitor. Although China was given time for its diplomacy, Beijing intensified its criticism of Tokyo on July 11, calling its resolution an “overreaction.” Assistant Secretary of State Chris Hill reported from Beijing on July 12 that China’s diplomatic mission failed to achieve progress in getting Pyongyang back to the talks.

On July 12, China (and Russia) reportedly dropped their pursuit of a draft statement to sponsor a draft UNSC resolution that countered Japan’s resolution primarily by withholding authority under Chapter VII (for sanctions or use of force). Still, China’s resolution called for nations to resume the Six-Party Talks and refrain from supplying technology or funds to the DPRK’s missile program. Despite similar goals, Beijing’s envoy threatened to veto Japan’s resolution.

Ultimately, negotiations led to **UNSC Resolution 1695** that was adopted unanimously on July 15, 2006, condemning the DPRK’s missile launches, demanding that it suspend its missile program, requiring all countries to prevent technology transfers to its missile or WMD programs, requiring countries to prevent missile proliferation from the DPRK and financial transfers to its missile or WMD programs, as well as urging the DPRK in particular to show restraint and return to the Six-Party Talks (with implementation of the September 2005 Joint Statement and abandonment of all nuclear weapons and nuclear programs). However, China’s statement on the resolution urged all countries to practice restraint. Still, in her public reaction the next day, Secretary of State Rice maintained that North Korea was “isolated” and singled out China for voting “affirmatively” for the resolution, stressing that it requires countries to prevent dangerous technology transfers to North Korea. While in St. Petersburg, Russia, the next day, for the Group of Eight summit, President Bush thanked Hu Jintao for his “leadership” on the resolution. Also, on July 26, 2006, the White House confirmed reports that in late 2005, China had frozen North Korean assets in the Bank of China for counterfeiting the PRC currency.⁷⁴

Nonetheless, at a hearing of the Senate Foreign Relations Committee on July 20, 2006, Chairman Richard Lugar pointed out that China facilitated talks on the DPRK while continuing to supply key energy and lifelines into North Korea. He warned that although China wanted to avoid regional instability, the missiles tests were destabilizing; China’s ability to secure global benefits for its high economic growth rates depended on continued cooperation with the West; and “Beijing must reassess its regional priorities.” It remained unclear whether China supported use of Chapter VII, although Assistant Secretary Hill testified that the resolution’s language on “international peace and security” was a reference to Chapter VII. Despite the UNSC resolution, China criticized Japan’s sanctions on September 19 and refused to attend a meeting of eight countries to discuss the DPRK at the U.N. two days later.

Meanwhile, in late September 2006, the House and Senate passed the conference report for the National Defense Authorization Act for FY2007 (P.L. 109-364) that required the President to appoint a **North Korea Policy Coordinator** who shall conduct a complete policy review and report to Congress. The Administration did not comply with an appointment. Congress later repealed the requirement in the National Defense Authorization Act for FY2008 (P.L. 110-181).

⁷⁴ *Yonhap News*, July 24, 2006; *Reuters* and *Zhongguo Tongxun She*, July 26, 2006.

First Nuclear Test (October 2006)

On October 3, 2006, North Korea warned that it would conduct a nuclear test, and China reacted the next day by singling out North Korea to use restraint. On October 9, North Korea conducted a nuclear test. On the same day, even as President Bush reacted with no confirmation of the test, China confidently expressed its “opposition” to North Korea for “flagrantly” conducting a nuclear test. The next day, a PRC-owned newspaper in Hong Kong specifically reported that North Korea conducted a nuclear test 300 meters underground with an explosion of 800 tons.⁷⁵ China’s strongly negative reaction to this nuclear test reflected a heightened fear of instability on its periphery and frustration at North Korea’s defiance of China’s leaders. (On October 16, 2006, the Director of National Intelligence publicly confirmed this nuclear test of “less than a kiloton.” President Bush issued a formal determination on December 7, 2006, declaring that North Korea detonated a nuclear explosive device on October 9, 2006.)

The PRC Foreign Ministry denied that the Six-Party Talks failed and still urged a resumption of those talks, particularly between the United States and the DPRK. China also agreed to sanctions imposed by the U.N. Security Council, but China opposed the use of force and applying the Proliferation Security Initiative (PSI), of which China is not a member.⁷⁶ While the United States and Japan urged tough sanctions, they compromised over days of negotiations with China and Russia, which urged “balance” (with a targeted arms embargo, no ban on ships and aircraft, restrictive language for “measures under Article 41” (sanctions) of Chapter VII, “cooperative” action including cargo “inspections” to prevent weapons proliferation).

On October 14, 2006, China voted with all other members of the U.N. Security Council for **Resolution 1718**, imposing sanctions to prevent the supply of major weapons as well as items that could contribute to the DPRK’s nuclear, missile, or other WMD programs; luxury goods; transfers of funds for those programs; travel by people responsible for those programs; and inspection of cargo to prevent WMD proliferation. Secretary of State Rice praised China for its “remarkable evolution.” On October 17, Rice left for Japan and South Korea (allies first), China, and Russia, saying she expected every country to “fully implement all aspects” of Resolution 1718. She also defended the Administration’s approach, saying “what the President has done in putting together this coalition, with China at the center of it willing to go along with Chapter 7, is quite remarkable.”⁷⁷ In Beijing, Rice boasted to traveling reporters on October 20 that “China is now committed to the denuclearization of the Korean peninsula,” rather than Washington dealing bilaterally with Pyongyang.

However, China’s enforcement of the resolution was questionable, as it called for “cooperative action” in “inspection” (and not interception or interdiction) of cargo. Also, while any PRC sanctions under its strict interpretation of Resolution 1718 might seek to counter the DPRK’s weapons-related activities, they might not be sufficiently broad or effective in achieving the ultimate, unrealized goal of the dismantlement of North Korea’s nuclear weapons and programs. China’s agreement to ban luxury goods could have indicated its disapproval of the defiance of

⁷⁵ *Ta Kung Pao*, October 10, 2006.

⁷⁶ China likely has concerns about any military action by Japan, including logistical support for U.S. naval ships conducting inspection and interdiction at sea. Also, China became highly sensitive to U.S. inspection or interdiction at sea in 1993, when China was the target of U.S. inspection of a cargo ship called *Yinhe*, which was suspected of supplying chemicals to Iran. See CRS Report 96-767, *Chinese Proliferation of Weapons of Mass Destruction: Background and Analysis*, by Shirley A. Kan.

⁷⁷ Secretary Condoleezza Rice, “Briefing on Upcoming Trip to Asia,” October 16, 2006.

Kim's regime. However, "luxury goods" were not defined, and North Korean elites reportedly continued to enjoy shopping sprees across the border in Dandong, China.⁷⁸ Indeed, China increased the export of banned luxury goods to North Korea from 2006 to 2007.⁷⁹

Immediately after voting for the resolution, the PRC ambassador stated his reservations that "China does not approve of the practice of inspecting cargo" to and from the DPRK. After imposition of sanctions, China's customs agents reportedly carried out more stringent inspections of cross-border traffic, perhaps to prevent dangerous transfers.⁸⁰ China seemed to have tightened "inspections" (to the letter of the resolution), without participation in military inspection or interdiction at sea. Also, after the nuclear test, China's major state-owned banks suspended financial transactions with North Korea and then relaxed restrictions around mid-November.⁸¹

Other than these initial and limited actions, PRC and foreign reports portrayed business as usual in PRC trade with North Korea.⁸² The PRC Foreign Ministry also declared on October 17 that the "China-DPRK border is normal." China had numerous other options, including limiting its exports to and imports from North Korea, valued at \$1.6 billion in 2005.⁸³ Limiting investments there and cracking down on smuggling were other PRC options. On October 22, PRC media reported the arrest of two people for smuggling uranium, possibly from North Korea, but that arrest took place in September 2006, before the nuclear test.⁸⁴ China also could have cut crude oil supplies (up to 90% of the DPRK's supplies). Some stoppage of supplies (in February 2005, February 2006, and September 2006) was reported, but that took place before the DPRK's nuclear test and not as implementation of sanctions. Also, PRC provision of diesel fuel as assistance to North Korea continued. The amount of crude oil that the PRC exported to the DPRK remained the same in 2005 to 2007.⁸⁵

Continued 5th Round, Bilateral Meetings, and February 2007 Statement

On October 31, 2006, the PRC announced a trilateral meeting among PRC, DPRK, and U.S. officials in Beijing, at which they agreed to resume the Six-Party Talks "soon." Meeting reporters in the Oval Office, President Bush publicly thanked China for this bit of news. Nearly two months later, what China called the "second phase" of the fifth round took place in Beijing on December 18-22, 2006. China proposed "working groups"—including bilateral ones—and issued a statement citing "useful" talks on how to implement the September 2005 Joint Statement. However, Assistant Secretary Hill reported no breakthrough.

⁷⁸ Gordon Fairclough, "Close-out Sale: North Korea's Elite Shop While They Can," *Wall Street Journal*, December 18, 2006.

⁷⁹ Nicholas Kravet, "Chinese Exports Blunt U.N. Sanctions," *Washington Times*, December 19, 2008, citing a report by the Peterson Institute for International Economics.

⁸⁰ *AP*, October 16, 2006; *Yonhap*, October 17, 2006; *China Daily*, October 19, 2006.

⁸¹ *JijiWeb*, Tokyo, October 25, 2006; a State Department official, November 13, 2006; *JijiWeb*, November 26, 2006; *Nihon Keizai Shimbun*, November 28, 2006. The PRC foreign ministry denied on October 24 that the PRC ordered the banks to stop "normal" commercial transactions with North Korea but did not deny the suspension of transactions.

⁸² *Wen Wei Po*, October 17, 2006; *Huanqiu Shibao*, October 19, 2006; *New York Times*, October 27, 2006.

⁸³ *Zhongguo Jingying Bao*, October 16, 2006.

⁸⁴ *Liaoning Jingwang*, Shenyang, October 22, 2006; *Chosun Ilbo*, Seoul, October 24, 2006.

⁸⁵ *New York Times*, October 31, 2006; *Yonhap*, November 8, 2006; and Global Trade Atlas.

Significantly, on January 16-17, 2007, separately from the Six-Party Talks and for the first time outside of Beijing, Hill traveled to Berlin and held a bilateral meeting with his North Korean counterpart to make progress in the process of meetings. Hill indicated U.S. willingness and flexibility to use a “bilateral mechanism,” with the specific approval of President Bush and Secretary Rice to resolve the problem.⁸⁶ Meanwhile in Beijing, Deputy Assistant Secretary of Treasury Daniel Glaser held separate talks with the North Koreans on sanctions that froze North Korean assets at a bank in Macau, Banco Delta Asia (BDA). On January 30, 2007, Glaser resumed those talks in Beijing, and China said that the “third phase” would start on February 8.

On February 13, 2007, the six countries agreed to a joint statement based upon which North Korea would shut down the Yongbyon nuclear facility and allow IAEA inspections. The DPRK also would “discuss” with other parties a list of all nuclear programs that would be abandoned. The United States agreed to start bilateral talks with the goal of a diplomatic relationship and the removal of the DPRK from the list of state sponsors of terrorism. Five Working Groups were established: (1) denuclearization of the Korean Peninsula; (2) normalization of U.S.-DPRK relations; (3) normalization of DPRK-Japan relations; (4) economic and energy cooperation; and (5) Northeast Asian Peace and Security Mechanism. Based on the DPRK’s progress in meeting the terms of the agreement, economic aid (including a total of one million tons of heavy fuel oil), a ministerial meeting including Secretary of State Rice, and negotiations for permanent peace on the Korean Peninsula were promised. Speaking in Washington, Secretary Rice also said that the United States agreed to resolve, through a separate channel, the issue of whether to release North Korean funds at Banco Delta Asia within 30 days.

Restated Assessment of Uranium Program

Shortly after the February 13, 2007, agreement, Assistant Secretary Hill updated the assessment of the DPRK’s highly enriched uranium (HEU) program, saying that North Korea purchased some equipment (including Pakistani centrifuges from A.Q. Khan) and that there was a question of whether its procured aluminum tubes were used in a HEU program. Hill also said “the North Koreans have not acknowledged having an HEU program.”⁸⁷ In addition, Joseph DeTrani, Mission Manager for North Korea for the Director of National Intelligence (DNI), testified to Congress on February 27 that whereas U.S. intelligence had “high confidence” in October 2002 that North Korea was acquiring material sufficient for a production-scale capability to enrich uranium, there was a change to “mid-confidence.”⁸⁸ An unnamed U.S. official clarified in June 2007 that the 2002 finding of the DPRK’s acquisition of equipment did not change, but U.S. confidence about the progress of the HEU program changed.⁸⁹ This re-statement could have given credence to PRC doubts about U.S. intelligence. (As mentioned above, in June 2004, PRC’s Deputy Foreign Minister Zhou Wenzhong publicly questioned the credibility of U.S. intelligence about North Korea’s uranium enrichment program.) The intelligence community (IC) told Congress in the “Section 721 report” for 2007 that although North Korea halted and disabled portions of its *plutonium* production program, “we assess with high confidence it has in the past pursued a uranium enrichment capability that we judge is for nuclear weapons and assess with at

⁸⁶ State Department, Christopher Hill’s briefing, Berlin, Germany, January 17, 2007.

⁸⁷ Christopher Hill, “Update on the Six-Party Talks,” remarks to the Brookings Institution, Korea Economic Institute, and Asia Society, February 22, 2007.

⁸⁸ Senate Armed Services Committee, hearing on the “Annual Threat Assessment of the Director of National Intelligence,” February 27, 2007.

⁸⁹ Bill Gertz, “Data on N. Korea Centrifuges Sought,” *Washington Times*, June 12, 2007.

least moderate confidence that it continues to pursue such a capability.” For 2008, the IC reported that “although North Korea has halted and disabled portions of its plutonium production program, we continue to assess North Korea has pursued a uranium enrichment capability at least in the past. Some in the IC have increasing concerns that North Korea has an ongoing covert uranium enrichment program.”

6th Round and October 2007 Statement

The “sixth round” of talks began on March 19, 2007, and then adjourned on March 22, with North Korea demanding that its frozen funds (about \$25 million) be released from Banco Delta Asia in Macau. After the Treasury Department worked with Russia to release the \$25 million to North Korea on June 14, 2007, diplomacy resumed on the dismantlement of nuclear programs.

Again meeting bilaterally and not in Beijing, Assistant Secretary of State Hill visited Pyongyang on June 21 and briefed reporters in Washington four days later on U.S. goals for the disablement of the DPRK’s Yongbyon nuclear reactor by the end of 2007 and “complete clarity” on the highly enriched uranium program. On July 3, PRC Foreign Minister Yang Jiechi was in Pyongyang to convey a message from Hu Jintao to Kim Jong-il that the September 2005 and February 2007 joint statements should be “fully implemented.” With the IAEA’s verification, the DPRK shut down the reactor and related facilities at Yongbyon on July 14. The “Six-Party Talks” resumed on July 18-20. However, the Joint Statement issued by the PRC did not include a deadline for the DPRK’s declaration of all nuclear programs and disablement of all nuclear facilities.

A number of meetings involving the working groups were held in August and September 2007, including bilateral talks. On September 1-2, 2007, Assistant Secretary Hill again held bilateral negotiations with North Korea outside of the Six-Party Talks in Beijing, this time in Geneva. He announced an agreement that the DPRK would provide a full declaration of all nuclear programs and disable nuclear programs by the end of 2007. Nonetheless, Hill asserted that this was “not a bilateral process,” while the PRC applauded the improved U.S.-DPRK relationship.⁹⁰

Meanwhile, on September 16, China provided its first shipment of 50,000 tons of heavy oil to North Korea. When China hosted the “second session of the 6th round of the Six-Party Talks” on September 27-30 in Beijing, PRC Vice Foreign Minister Wu Dawei stressed the progress made by the Working Groups. Days later, China issued a Joint Document on October 3, 2007. In the statement, the DPRK agreed to disable all nuclear facilities, and this disablement focused on three facilities (including the Yongbyon reactor site) to be completed by December 31, 2007. The United States alone agreed to lead disablement work and provide funding. The DPRK also agreed to provide a “complete and correct declaration” of all nuclear programs. The DPRK reaffirmed its commitment on nuclear nonproliferation. The statement also discussed normalization of the U.S.-DPRK and Japan-DPRK relationships and a ministerial-level meeting with no set dates.

Implementation and Impasse

However, the PRC-sponsored Joint Document of October 2007 raised a number of questions about implementation, including about the disposition of nuclear equipment (in North Korea,

⁹⁰ State Department, “North Korea to Disable Nuclear Programs by End of 2007,” Geneva, Switzerland, September 2, 2007; “U.S.-DPRK Bilateral Working Group Talks End; DPRK Agrees to Declare its Nuclear Programs and Disable Its Nuclear Facilities,” *China News Agency*, September 3, 2007; *Xinhua*, September 4 and 6, 2007.

China, Russia, or elsewhere); disablement of nuclear facilities aside from the three cited; ultimate dismantlement of nuclear facilities; U.S.-only funding and work for disablement; declaration of nuclear weapons in addition to nuclear programs; clarification of uranium as well as plutonium programs; missile and nuclear proliferation (with the North Korean-built nuclear reactor in Syria just bombed by Israel in September⁹¹); nuclear testing sites; verification and monitoring; timelines for bilateral normalization; other concerns of the United States and Japan about human rights, terrorism, and abductions; strains in the U.S.-Japan alliance; coordination with Seoul; and the State Department's consultations with Congress, Defense Department, and European allies.

In November 2007, U.S. Energy and State Departments assigned liaison officials in Pyongyang, to monitor and pay for disablement at Yongbyon, including the unloading of reactor fuel rods. (U.S. officials stayed until the DPRK regime kicked them out during the week of April 13, 2009.) Approaching the end of 2007 deadline for disablement and declaration, Assistant Secretary of State Hill went on his second visit to Pyongyang in early December 2007, bringing a letter from President Bush to Kim Jong-il. PRC Vice Foreign Minister Wu Dawei followed with his visit to Pyongyang on December 17-19, but the visit also did not produce a declaration of nuclear programs. Upon the deadline of December 30, 2007, the State Department said it was "unfortunate" that North Korea failed to provide a complete and correct declaration of all nuclear programs and slowed down disablement work, but assured that diplomatic talks would continue. The PRC declined to express urgent concern, calling the situation "normal."

In early 2008, some critics contended that China failed to exert strong economic and diplomatic leverage with North Korea even as it claimed credit for hosting the talks. Former Under Secretary of State John Bolton wrote that "we are long past the point of allowing China to cover for Kim Jong-Il without any cost in its relations with the U.S." Jay Lefkowitz, President Bush's Special Envoy on North Korean human rights, questioned the "misguided assumption" that China would apply significant pressure on North Korea to abandon nuclear weapons. He noted that the PRC's assistance to and trade with North Korea have "persisted with only brief interruptions."⁹²

As the impasse continued into 2008, China's role came into greater question. China reportedly suspended food aid to North Korea at the start of 2008.⁹³ Then, coinciding with State Department official Sung Kim's visit to Pyongyang in late January/early February, Wang Jiarui, Director of the International Department of the Communist Party of China, traveled to Pyongyang and met with Kim Jong-il, calling for "full implementation" of the agreements on denuclearization. However, the DPRK did not provide a declaration to either official. Visiting Beijing on February 26, Secretary of State Rice said she urged China to use all influence with the DPRK to press it to provide the required complete and correct declaration.

Hill and DPRK Vice Foreign Minister Kim Kye Gwan met bilaterally in Beijing on February 19 and in Geneva on March 13, 2008. In another meeting in Singapore in April, the United States and North Korea reached a compromise agreement (without a released text) that North Korea would declare its plutonium but separately "acknowledge" its uranium enrichment program and

⁹¹ Barbara Opall-Rome and Vago Muradian, "Bush Privately Lauds Israeli Attack on Syria," *Defense News*, January 14, 2008; Paul Richter, "West Says N. Korea, Syria Had Nuclear Link," *Los Angeles Times*, January 17, 2008.

⁹² John Bolton, "North Korea's True Colors," *Wall Street Journal*, January 11, 2008; and Jay Lefkowitz, U.S. Special Envoy for Human Rights in North Korea, "North Korean Human Rights and U.S. National Security," speech at AEI, January 17, 2008.

⁹³ *Hankyoreh*, Seoul, January 5, 2008.

the nuclear reactor it built in Syria that Israel bombed the previous September.⁹⁴ On May 8 in Pyongyang, the DPRK provided to visiting U.S. State Department official, Sung Kim, documents related to plutonium production since 1986 at the Yongbyon facilities. The State Department continued to call for a complete and correct declaration from North Korea for outside verification. Days later, when Deputy Secretary of State John Negroponte visited Beijing on May 12, PRC Vice Foreign Minister Wang Yi applauded the bilateral negotiation between the United States and the DPRK, while they discussed a Northeast Asian peace and security mechanism. In late May, Hill returned to Beijing to continue asking for the DPRK's declaration.

Partial Declaration and Verification Protocol

On June 17-19, 2008, PRC Vice President and Communist Party Politburo Standing Committee Member Xi Jinping visited Pyongyang and promised gifts to the DPRK regime in the form of 5,000 tons of aviation fuel and about \$15 million. The PRC Foreign Ministry vaguely confirmed that Xi Jinping provided "aid" to the DPRK.⁹⁵

Meanwhile, Secretary of State Rice gave a speech on June 18, defending the "Six Party Talks" and reliance on China. She said, "our decision to support China as the chair of the six-party talks has also been a strong incentive for Beijing to conduct itself responsibly" on North Korea. She said that a goal is to formalize "these patterns of cooperation" into a Northeast Asian peace and security mechanism. She continued to state that the objective is to verifiably eliminate "all of North Korea's nuclear weapons and programs." Rice stated that North Korea has proliferated nuclear technology to Syria and has pursued a uranium enrichment program, although the extent of those activities was unclear. She disclosed that there was troubling new information about North Korea's uranium enrichment capability. She said that after North Korea delivered its declaration of nuclear programs to China, President Bush would notify Congress of his intention to remove North Korea from the list of State Sponsors of Terrorism and to lift sanctions under the Trading with the Enemy Act. But she warned that "before those actions go into effect," the United States would assess North Korea's cooperation in verifying that nuclear declaration. Rice stressed, "we are insisting on verification." She called for rigorous verification as based on a detailed plan and involving the other five countries as well as the IAEA; on-site access to facilities; collection and removal of samples; forensic analysis of materials and equipment at North Korean sites and facilities; access to design documents and other records "for all facilities associated with production and processing of all nuclear materials in North Korea;" and interviews with North Koreans.⁹⁶

A week after PRC leader Xi Jinping's visit to Pyongyang, the DPRK complied with a partial declaration on its plutonium program. PRC Vice Foreign Minister Wu Dawei issued a statement on June 26, 2008, telling the DPRK to submit its nuclear declaration to China that day and also telling the United States to remove the DPRK from the list of State Sponsors of Terrorism and from sanctions under the Trading with the Enemy Act. Wu stated that there was agreement only on a "set of principles to guide the establishment of a verification regime."

⁹⁴ Glenn Kessler, "U.S. Ready to Ease Sanctions on N. Korea," *Washington Post*, April 11, 2008.

⁹⁵ *Yonhap*, Seoul, July 4, 2008; PRC Foreign Ministry news conference, Beijing, July 8, 2008.

⁹⁶ Secretary of State Condoleezza Rice, "U.S. Policy Toward Asia," speech at the Heritage Foundation, June 18, 2008.

On the same day, President Bush quickly complied with U.S. actions. He removed North Korea from sanctions under the Trading with the Enemy Act and notified Congress of his intention to rescind North Korea's designation as a State Sponsor of Terrorism to be possible in 45 days. Bush did not condition his actions on verification of the DPRK's nuclear programs, weapons, and proliferation, saying that "we will work through the six-party talks to develop a comprehensive and rigorous verification protocol." Speaking on the same day about the President's actions, National Security Advisor Stephen Hadley acknowledged that he had not yet seen the declaration and that he was relying on a "process" to get a verification protocol in place within 45 days.⁹⁷ The next day, U.S. officials traveled to Yongbyon for a symbolic show when the cooling tower of the reactor was destroyed. These moves came after the United States agreed to pay \$2.5 million for that televised explosion and to accept a concession for North Korean "acknowledgments" on uranium and proliferation. Moreover, the United States reportedly agreed with PRC demands to keep the declaration secret.⁹⁸

Secretary of State Rice then traveled to Beijing at the end of June to praise China's "leading role" and to press for the need for a framework for verification and monitoring, acknowledging that "we moved some of the verification steps up into the second phase." (As discussed above, the Joint Document of October 2007 left a number of unsettled questions about implementation, including verification.) While Rice stressed the need to agree on verification and monitoring, PRC Foreign Minister Yang Jiechi did not mention this need in their public comments.⁹⁹

For the first time since the previous September, the formal format of the Six-Party Talks resumed in Beijing on July 10-12, 2008, along with a bilateral U.S.-DPRK meeting in Beijing on July 8, to discuss the broad U.S. proposal for a verification protocol. The "Six-Party Talks" issued a press statement on agreeing to set up a verification framework, but that fell short of the U.S. requirements for rigorous verification, as Secretary Rice specified in June. There was no primary role for the IAEA and no mention of sampling, forensics, or schedules. Still, Rice allowed a ministerial meeting with her DPRK counterpart on July 23 at a regional meeting in Singapore. President Bush did not take the DPRK off the terrorism list when legally possible on August 11. North Korea announced on August 26 that it suspended disablement at Yongbyon on August 14. The PRC Foreign Ministry's reaction was to call for "patience."

Assistant Secretary of State Hill returned to Beijing in early September, contending that China understood the "urgency" and praising China's role in chairing the talks as "excellent," "active," "superb," and "crucial." He outlined the limited goal for the DPRK, "not asking for the declaration to be verified now," but "simply asking for the rules of how it will be verified." He acknowledged that the DPRK's declaration was not yet verifiable. Still, Hill also stated that after North Korea agreed on a verification protocol, then the United States would immediately remove North Korea from the list of State Sponsors of Terrorism. In the same month, National Security Advisor Hadley conceded that North Korea's nuclear declaration "was not the complete and correct declaration that we had hoped." Nonetheless, he stated that after the DPRK accepts the

⁹⁷ White House, "Statement by the Press Secretary on North Korea," "Memorandum for the Secretary of State," "President Bush Discusses North Korea," and "National Security Advisor Hadley Holds White House News Briefing on the North Korean Nuclear Declaration," June 26, 2008.

⁹⁸ Glenn Kessler, "Message to U.S. Preceded Nuclear Declaration by North Korea," *Washington Post*, July 2, 2008; Bill Gertz, "Inside the Ring," *Washington Times*, July 24, 2008.

⁹⁹ Secretary of State Condoleezza Rice, "Remarks with Chinese Foreign Minister Yang" and "Remarks with the Press in Beijing," Beijing, June 29 and 30, 2008.

verification protocol, it would be taken off the terrorism list.¹⁰⁰ Instead, on September 22, the DPRK provocatively asked IAEA inspectors to remove surveillance cameras and seals at the reactor and then announced intention to resume nuclear reprocessing at Yongbyon.

Hill went back to Pyongyang on October 1-3, and afterwards, China applauded those bilateral negotiations. On October 11, 2008, in Washington, the United States announced a bilateral “agreement” with North Korea on “verification measures” that would include sampling and forensics and would be applied to plutonium, uranium, and proliferation programs. But there would not be a standard, primary role for the IAEA. The State Department issued a press statement and a fact sheet, but not the U.S.-DPRK “agreement” itself. The State Department vaguely cited agreement in a written joint document and “certain other understandings” for measures that “will serve as the baseline for a Verification Protocol.”¹⁰¹ However, despite the lack of a verification protocol, a timeline for one, or an agreement at the “Six-Party Talks,” the Secretary of State “immediately” rescinded the designation of the DPRK as a State Sponsor of Terrorism. This controversial decision was a retreat from the earlier U.S. position of first getting DPRK acceptance of a verification protocol, as officials stated.

Even then, on November 12, 2008, the DPRK denied it had agreed to all the U.S. verification measures, specifically sampling, in the written agreement negotiated with Hill. After bilateral talks between Hill and his DPRK counterpart in Singapore on December 4-5, negotiators convened the “Six-Party Talks” in Beijing on December 8-11 but failed to get the DPRK’s agreement on an effective verification protocol, despite the U.S.-DPRK “agreement” in October and what the United States called China’s “crucial” role.

Missile and Nuclear Tests (April and May 2009)

After December 2008 and particularly after the DPRK’s second nuclear test in May 2009, critics charged that the “Six-Party Talks” saw their “final collapse,” failed even to address the DPRK’s nuclear weapons, and drove wedges into U.S. alliances with Japan and South Korea. In this view, during the Six-Party Talks, the DPRK continued to proliferate suspected nuclear technology to countries such as Syria and Burma. Moreover, successive U.S. administrations have failed to keep North Korea free of nuclear weapons, and its ballistic missile and nuclear weapon programs have advanced. In contrast to U.S. compliments to China, some have stressed that China failed to tighten aid to the military and party elite in Pyongyang and Beijing has not used its leverage more effectively on Pyongyang. Thus, the question in 2009 became how the United States should work with China while recognizing the problems if not failure in the Six-Party Talks. Some argued that the United States should recognize China as less critical, given its different priorities and support for the DPRK regime. In another view, the United States should continue engagement with China given the DPRK’s dependence on China and the U.S. goal of moving to broader resolution of tensions in the Northeast Asian area and contingencies in a crisis. Still, a strategic review by Henry Kissinger noted that North Korea reversed two decades of negotiations with multilateral as

¹⁰⁰ Assistant Secretary of State Christopher Hill, “Evening Walkthrough at Six-Party Talks,” September 6; “Press Briefing by National Security Advisor Stephen Hadley on Upcoming U.N. General Assembly,” September 20, 2008.

¹⁰¹ State Department, “U.S.-DPRK Agreement on Denuclearization Verification Measures,” “Fact Sheet, U.S.-North Korea Understandings on Verification,” “On the Record Briefing: Special Envoy for the Six-Party Talks Ambassador Sung Kim, Assistant Secretary of State for Public Affairs Sean McCormack, Assistant Secretary of State for Verification, Compliance, and Implementation Paula DeSutter, and Acting Assistant Secretary of State for International Security and Nonproliferation Patricia McNerney on North Korea,” October 11, 2008.

well as bilateral efforts, while “process has overwhelmed substance.” Moreover, “Pyongyang has used the negotiating forums available to it in a skillful campaign of procrastination, alternating leaps in technological progress with negotiating phases to consolidate it.”¹⁰²

China has extensive economic influence on North Korea, in addition to the provision of luxury goods for DPRK military and civilian elites as discussed elsewhere in this report. The economic ties have both increased and decreased, apparently based on decisions that the PRC could make. From 2002 to 2007, North Korea’s imports from China increased by almost 200%. Those imports from China accounted for 31% of total imports in 2002 but expanded to 69% of North Korea’s total imports in 2007. Moreover, the value of China’s exports of energy products to North Korea tripled over that period and rose from 25% to 29% of exports to North Korea. Trade between China and North Korea increased in 2008 by 41% to \$2.8 billion. As 2009 started, China resumed shipping food to North Korea, aid that was apparently suspended a year ago. By the end of 2009, China cut its export of crude oil to North Korea by 27% from 2008.¹⁰³

On January 23, 2009, the DPRK’s Kim Jong-il met with Wang Jiarui, the visiting Director of the International Liaison Department of the Communist Party of China, and pledged to the “denuclearization of the Korean Peninsula” and praised China’s role in the Six-Party Talks. Meanwhile, on February 13, President Obama’s Secretary of State Hillary Clinton called the Six-Party Talks “a very important forum,” indicating continuation of President Bush’s strategy. A week later, she appointed Stephen Bosworth as the Special Representative for North Korea Policy, but on a part-time basis. PRC Foreign Ministry official Wu Dawei quietly visited Pyongyang on February 17-19 on the eve of Clinton’s visit to Beijing, but North Korea asked for light water reactors.¹⁰⁴ However, by early February, satellites detected that North Korea was preparing another test of its Taepodong-2 inter-continental ballistic missile (after the previous test in 2006).¹⁰⁵ North Korea then claimed on February 23 that it planned to launch a “satellite,” not test a missile. Even according to official PRC media, Premier Wen Jiabao singled out North Korea for raising tension, when he met with his DPRK counter-part in Beijing on March 18.

Still, North Korea launched a **Taepodong-2 missile on April 5, 2009**, which passed over the Sea of Japan and the nation of Japan. According to the North American Aerospace Defense Command, the missile’s first stage fell into the Sea of Japan, and the other stages with the payload fell into the Pacific Ocean, while no object entered into orbit. The DPRK’s missile

¹⁰² “Condi’s Korean Failure,” editorial, *Wall Street Journal*, December 16, 2008. Yoichi Kato, “Richard Armitage: Bush Administration Lacked Accountability,” *Asahi Shimbun*, December 27, 2008. John Bolton, “Obama Promises Bush III on Iran,” *Wall Street Journal*, January 2, 2009. Victor Cha called for urging China to tighten aid to North Korea in a PacNet article, “Bad Advice for Secretary Clinton,” March 9, 2009. Dan Blumenthal and Robert Kagan, in “What to Do About North Korea,” *Washington Post*, May 26, 2009, wrote that the proposition of looking to China for help has been discredited. But Michael McDevitt wrote in “North Korea as a Nuclear Weapons State,” PacNet #41A, June 2, 2009, that the United States should start a serious discussion with China about all options in a strategic approach to North Korea, including regime change. Henry Kissinger, “North Korea Throws Down the Gauntlet,” *New York Times*, June 4, 2009; and “The North Korean Fallout,” *Washington Post*, August 9, 2009.

¹⁰³ Julia Joo-A Lee, “To Fuel or Not to Fuel: China’s Energy Assistance to North Korea,” *Asian Security*, January 2009; *Zhongguo Yanbian*, Yangji, January 20, 2009; Evan Ramstad and Gordon Fairclough, “Economic Interests Shape Beijing’s Pyongyang Policy,” *Wall Street Journal*, April 8, 2009; Blaine Harden, “China Trade Helps Shield N. Korea,” *Washington Post*, June 27, 2009; Global Trade Atlas.

¹⁰⁴ *JoonAng Daily*, February 27, 2009; *Kyodo*, March 19, 2009.

¹⁰⁵ Jay Solomon and Siobhan Gorman, “U.S. Believes North Korea May Be Preparing Long-range Missile Test,” *Wall Street Journal*, February 3, 2009.

appears to have flown as far as 2,390 miles.¹⁰⁶ President Obama issued a statement that day, saying that the DPRK's launch of the Taepodong-2 missile was a clear violation of U.N. Security Council Resolution 1718 that prohibited North Korea from activities related to ballistic missiles, and he called for action by the UNSC. The U.S. position saw such activities as covering the similar space launch vehicles and did not see a "satellite launch" as allowed in a loophole. PRC official media published a rare interview with a specialist of the PLA's Second Artillery (missile force) who stressed that missile and satellite launches involved similar technologies, except for a warhead.¹⁰⁷ In the end, on April 11, China agreed to a compromise to condemn the launch as a violation of Resolution 1718 but with a UNSC presidential statement rather than a resolution as preferred by the United States and Japan.¹⁰⁸ On April 13, the UNSC issued a presidential statement that condemned the launch, with no mention of a "satellite," and called for designating targets of sanctions under 1718. China's enforcement of such sanctions again raised a concern.

On April 13, the DPRK regime responded by kicking out U.S. Departments of Energy and State officials and IAEA inspectors, and re-starting nuclear facilities. Then, the DPRK regime conducted a **second nuclear test on May 25, 2009**, Memorial Day in the United States. (The Director of National Intelligence (DNI) issued a statement on June 15 that North Korea probably conducted an underground nuclear explosion on May 25, 2009, that yielded a few kilotons. The DNI's Section 721 Report for 2009 assessed progress in the DPRK's nuclear program, reporting to Congress that the nuclear test in 2009 was apparently more successful than the test in 2006.) On the same day, the UNSC issued a Presidential Statement to condemn the nuclear test as a violation of Resolution 1718. Moreover, President Obama promptly spoke with Japan's Prime Minister and South Korea's President but not with the PRC's Hu Jintao on that day. The United States, South Korea, and Japan agreed to seek a new UNSC resolution with sanctions. Meanwhile, South Korea announced that it finally joined the U.S.-led Proliferation Security Initiative (PSI), launched in 2003, a step that could convince China that the situation in the Korean peninsula was destabilizing and to take stronger steps against North Korea. (On June 26, 2009, Representative Ros-Lehtinen introduced **H.Res. 604** in part to congratulate South Korea for joining PSI and to urge China and other nations not in PSI to implement UNSC resolutions. Later, in October 2010, South Korea hosted a multinational PSI drill for the first time.)

On May 30, 2009, even the PLA's lower-level representative to the Asian defense ministers' conference (Shangri-la dialogue) in Singapore, Deputy Chief of General Staff Ma Xiaotian, criticized North Korea's second nuclear test. But that was not the first time that a senior PLA officer criticized North Korea's provocations. As discussed above, the top PLA officer, General Guo Boxiong, visited Washington in July 2006 and criticized North Korea's July 4 missile tests. The question was whether China would change its calculation about the situation in North Korea, shift its approach, and work more effectively to change the DPRK's behavior.

In late May and June 2009, PRC policy analysts and academics in civilian and military domains in Beijing engaged in a more **heated debate** about North Korea and whether its actions threatened China's interests, even to include whether China should abandon the special friendship that has protected the DPRK as a "buffer" for China. In a much-cited survey reported in an official newspaper, ten academics favored severe sanctions on North Korea, while ten opposed such abandonment of North Korea. The newspaper also published highly critical commentaries,

¹⁰⁶ Craig Covault, "North Korean Rocket flew Further Than Earlier Thought," *Spaceflight Now*, April 10, 2009.

¹⁰⁷ *Qingnian Cankao*, Beijing, April 7, 2009.

¹⁰⁸ Colum Lynch, "Key U.N. Powers Agree on N. Korea Statement," *Washington Post*, April 12, 2009.

including one suggesting that China would have to deal with the problem of the DPRK regime.¹⁰⁹ China was most concerned with the addition of more nuclear powers on its periphery, with North Korea and possibly Japan and South Korea (rather than another U.S. concern, that of North Korea's proliferation of nuclear technology to rogue regimes and terrorists). However, while there was academic anger in Beijing, official observers remained conservative and some pointed to the United States instead of reflecting on China's ambivalent approach. The PRC seemed to value retaining its unique central role and elevated importance in U.S. policy. Despite North Korea's defiance in seeking nuclear power status, there remained uncertainty about a major change in PRC policy including whether it would implement sanctions under existing or new UNSC resolutions. Reportedly, PRC policymakers met to review their approach toward North Korea.

On June 5, 2009, Deputy Secretary of State James Steinberg met in Beijing with State Councilor Dai Bingguo and other officials to discuss the response at the U.N. and the broader Northeast Asian situation, before concluding his visits that took him also to Singapore, Tokyo, and Seoul, and flying back to Washington that night. However, Foreign Minister Yang Jiechi told Steinberg that there would be no major change in PRC policy, according to official PRC media.

Five days later, China agreed with other countries at the UNSC on new sanctions in a draft resolution. Then, on June 12, 2009, the UNSC approved **Resolution 1874** to expand the sanctions previously imposed under Resolution 1718 in 2006. This time, the sanctions banned all of the DPRK's arms exports but banned only some arms imports, with exclusion of small arms and light weapons (reportedly because China insisted on the right to sell arms to North Korea). Resolution 1874 called for denial of services for and inspections of ships suspected of carrying banned cargo, but excluded the use of force and required consent of the flag state for inspections on the high seas. It called for denying financial support and services that could contribute to the DPRK's proliferation activities and prohibited programs. It called on countries to implement the previous Resolution 1718. China expressed opposition to the DPRK's nuclear test but also opposition to use of force and called for restraint and resumption of the Six-Party Talks.

However, concerns increased not only about China's **enforcement of sanctions** but also whether it could benefit by expanding its economic interests as other countries reduced ties to North Korea. Only on April 24, 2009, did the UNSC list three North Korean entities subject to sanctions imposed under 1718. Then on July 16, 2009, the UNSC designated some entities, goods, and individuals sanctioned under Resolution 1718. On August 3, China submitted a required report to the UNSC on its implementation of the sanctions under Resolutions 1718 and 1874, promising generally to implement controls according to the UNSC's lists of items embargoed for export to the DPRK, to freeze assets of listed individuals or entities, and to deny entry into China of listed people. However, the PRC did not report specific steps, promised only to "refrain" from exporting weapons to the DPRK (excepting small arms and light weapons while these could be used domestically in the DPRK), did not include a ban on exporting luxury goods to the DPRK, and stood against sanctions that affect the DPRK's "national development," "lives," or "normal" international ties. In spite of Resolution 1718's sanctions announced in 2006 on luxury goods, the UNSC did not issue a list of such banned goods that are imported by the DPRK's elite.

¹⁰⁹ Author's consultations in Beijing; also Tang Xiang, "Many Noted Chinese Scholars Support More Severe Sanctions to be Imposed on DPRK," *Huanqiu Shibao [Global Times]*, May 26, 2009; Sun Zhe, "DPRK Conducts Nuclear Blackmail," *Huanqiu Shibao*, May 26, 2009; Zhu Feng, "China Must Defend the Authority of the Six-Party Talks," *Huanqiu Shibao*, June 4, 2009; Zhu Feng, "North Korea Nuclear Test and Cornered China," PacNet #41, June 1, 2009.

In addition to the previous questions about China's enforcement of that ban on **luxury goods** for North Korea, an unnamed PRC company tried to complete an order originally made in February 2009 by an Austrian firm for two yachts suspected of going to Kim Jong-il instead of China as claimed. Italy blocked the \$18 million contract in July 2009.¹¹⁰ Meanwhile, in June, Japan arrested a South Korean resident for exporting in October and December 2008 34 pianos and four Mercedes-Benz cars (the cars that North Korean diplomats and other elites have used for decades) from Japan to the Rungra Trading Company in Pyongyang (also called Room 39 to benefit Kim Jong Il) through the Dalian Global Company in Dalian, China. Also, in December 2009, Japan arrested two traders who exported expensive cosmetics from Japan to North Korea in October 2008, again through Dalian Global. In addition, about 100 cars, called F3 and made by BYD in China, crossed the border to North Korea through Dalian in April 2010.¹¹¹ (On November 4, 2010, the United States imposed sanctions on the DPRK regime's Green Pine Associated Corporation, Reconnaissance General Bureau, and Office 39.)

Concerning **maritime interdiction**, in June 2009, just after the UNSC passed Resolution 1874 to sanction North Korea after its second nuclear test on May 25, the U.S. Navy's USS John McCain tracked a North Korean ship (Kang Nam 1) as it sailed toward Burma. Surprisingly, Burma then told North Korea that the ship would not be allowed to dock if it carried weapons or banned materials, and the ship returned to North Korea. Meeting at the Defense Consultative Talks in Beijing on June 24, Under Secretary of Defense Michele Flournoy said that she and the PLA did not discuss enforcement of the resolution against the ship off China's coast, claiming the meeting was not "appropriate" to discuss such "operational" details.¹¹² But at the ASEAN Regional Forum (ARF), Secretary of State Hillary Clinton said on July 23 that the United States asked China and Southeast Asian countries to convey to Burma concerns about the North Korean ship. She also confirmed concerns about military, including nuclear, cooperation between North Korea and Burma. (Back in November 2005, Senator Richard Lugar wrote of concerns about their military cooperation to the State Department.) Clinton praised China for "full implementation" of 1874.

In July, China released information through a local newspaper that Customs agents confiscated a rare metal used to produce alloy steel (called vanadium) being smuggled to North Korea. In the same month, China's NHI Shenyang Mining Machinery Company suspended construction of a bronze mine in North Korea with a company subject to U.N. sanctions. In August, the DPRK's Korea Kwangson Banking Corporation, under U.S. sanctions, closed in Dandong, China.¹¹³ After the DPRK's nuclear test in October 2006, there were also reports of China's initial actions.

PRC media reported that State Councilor Dai Bingguo met in Pyongyang with Kim Jong-il on September 18, and Kim told Dai that North Korea was willing to hold bilateral and multilateral talks, without mentioning the Six-Party Talks. On October 4, PRC Premier Wen Jiabao visited Pyongyang and signed bilateral agreements to provide economic and technical assistance. Then the day after, Kim Jong-il reportedly told Wen that North Korea would attend multilateral talks that include "Six-Party Talks," but depending upon U.S.-DPRK talks on "peaceful" ties. But in a news conference five days later, Wen repeatedly hinted at a resumption of the Six-Party Talks. Assistant Secretary of State Kurt Campbell promptly visited Beijing on October 14 and praised U.S.-PRC coordination as "tight and close," reminiscent of his predecessor Chris Hill's praise in

¹¹⁰ *Financial Times*, July 22, 2009; *Associated Press*, July 23, 2009.

¹¹¹ *Kyodo*, June 9, 2009, December 1, 2009; *Sankei Shimbun*, February 3, 2010; *TV Asahi*, April 14, 2010.

¹¹² Quoted by *Voice of America*, June 24, 2009.

¹¹³ *Dandong Ribao*, July 28, 2009; *Chosun Ilbo*, July 30, 2009; *Yomiuri Shimbun*, October 1, 2009.

2008. U.S. coordinator of sanctions Philip Goldberg visited Beijing on October 20. He said China worked cooperatively to implement sanctions but also stated a need for that effort to continue.

Thus, despite a debate, the PRC leadership apparently decided against a fundamental change in policy toward North Korea in part because of an assessment that its nuclear program presented no direct threat to China; that it instead posed a challenge to U.S. interests; that Beijing could buy time for stability; and that Beijing perceived no strong U.S. pressure to help on a top priority.¹¹⁴ Critics have suspected China's preference for a *process* to talk, bolster its role, and sustain the status quo (that includes a divided Korean peninsula), in contrast to the United States and allies, particularly South Korea and Japan, that seek real *results* in the stated goals for the DPRK. China stepped up engagement with the DPRK, rather than isolating it. As discussed above, PRC Defense Minister Liang Guanglie visited Pyongyang in November 2009. In December, China's Minister of Public Security hosted and promised material aid to his North Korean counterpart. China's continued support for the DPRK regime could have induced it to negotiate with a greater sense of security, but bolstering the regime proved counterproductive as it became less willing (if it had been willing) to forego its nuclear program as it developed more capabilities.

China could not charge the United States for lack of engagement with China or with the DPRK. President Obama visited Beijing for a summit in November 2009 and discussed with Hu Jintao the goal of the verifiable elimination of North Korea's nuclear weapons program, including through the resumption of the Six-Party Talks "as soon as possible." Moreover, President Obama posed a choice for Pyongyang to face "more isolation" or a better future by foregoing nuclear weapons. The Administration also stepped up signals for a robust bilateral dialogue by sending Special Representative Stephen Bosworth to Pyongyang on December 8, 2009, to seek North Korea's return to the Six-Party Talks and commitment to implement the Joint Statement of 2005. However, Bosworth said that his visit was exploratory, with no commitment from the DPRK, while he reportedly told the DPRK that future talks would cover its uranium enrichment.¹¹⁵

DPRK's Attacks and Uranium Enrichment (March and November 2010)

Even after the PRC protested President Obama's notifications to Congress on January 29, 2010, of arms sales to Taiwan, General Secretary Hu Jintao of the Communist Party of China (CPC) sent CPC Director of International Liaison Wang Jiarui to North Korea on February 8 to meet with Kim Jong Il and seek his return to the Six-Party Talks. However, the DPRK's media did not mention a discussion on the Six-Party Talks. Meanwhile, another challenge to re-starting the "Six-Party Talks" to negotiate with North Korea came after it attacked South Korea's naval ship, Cheonan, on March 26, 2010, killing 46 sailors. As of late April, Secretary of State Clinton and PRC State Councilor Dai Bingguo still discussed getting North Korea back to the "Six-Party process." However, when Kim Jong Il visited the PRC on May 3-7 and discussed the Six-Party Talks, the State Department on May 4 shifted to stress that South Korea's investigation of the Cheonan's sinking should be completed *before* any announcement from Beijing of a return by North Korea to the talks. PRC Premier Wen Jiabao reportedly denied aid to Kim Jong Il that would violate UNSC sanctions. After South Korea announced that the Cheonan was attacked by a

¹¹⁴ Author's consultations with close PRC observer of policymaking in Beijing, October 2009; Jonathan Pollack, "Kim Jong-il's Clenched Fist," *Washington Quarterly*, October 2009. As one indication of attitudes in the PRC, a poll conducted by the Lowry Institute and MacArthur Foundation in August-September 2009 found that 34% of those polled considered the United States as the greatest threat, while just 3% considered North Korea as the greatest threat.

¹¹⁵ *Washington Post*, December 28, 2009.

North Korean torpedo, Premier Wen visited Seoul and said that China would not protect anyone responsible for the attack.¹¹⁶ On May 20, South Korea announced the finding that North Korea sank the Cheonan. At the G-20 summit in Toronto on June 27, 2010, President Obama criticized China for “willful blindness” toward North Korea. Nonetheless, taking a different stance from the United States, South Korea, and other countries, China refused to condemn directly North Korea, including in negotiations for a UNSC Presidential Statement issued on July 9. Still, in that statement, the UNSC condemned the “attack.” Later, in July, the PRC’s military and then followed by the Foreign Ministry (apparently facing the PLA’s pressure) expressed “opposition” to U.S.-ROK exercises in the Yellow Sea aimed at deterring North Korea and improving South Korea’s defense, even before the United States and South Korea announced on July 20 they will hold a series of exercises. The PRC’s stance on North Korea’s attack of the Cheonan increased Seoul’s distrust and skepticism toward Beijing. Later the same month, PRC Assistant Foreign Minister Hu Zhengyue visited Pyongyang, and a bilateral economic cooperation agreement was signed during this visit. The State Department’s Special Advisor Robert Einhorn acknowledged at a press conference in Tokyo on August 4, 2010, that the Obama Administration discussed with China the need to tightly enforce sanctions under UNSC Resolutions 1718 and 1874 against North Korea, rather than to capitalize on sanctions imposed by other countries.

With its diplomacy on the defensive, the PRC sent Special Representative Wu Dawei to Washington and other capitals in late August and early September to press for resuming the Six-Party Talks, including suggesting a three-step process of U.S.-DPRK talks, informal talks among the six countries, and then the Six-Party Talks. Later in the month, CPC General Secretary Hu Jintao hosted Kim Jong Il, expressed concern about developments *after* the UNSC’s statement on the Cheonan, and stressed peace and stability on the Korean peninsula ahead of mentioning denuclearization and the Six-Party Talks. PRC media did not report on any meeting between Premier Wen with Kim or the DPRK’s ambassador. With the DPRK’s missile and nuclear tests, and sinking of the Cheonan, the United States shifted to call the talks explicitly the “six-party process,” while doubting the credibility of any announcement in Beijing of repeated talks and looking for results in North Korea’s implementation of the existing Joint Statement of 2005.

On September 16, 2010, the Senate Armed Services Committee held a hearing with testimony from the Departments of Defense and State about efforts for stability in the Korean peninsula. However, the challenge continued with North Korea’s artillery attack against South Korea on November 23. The month before, the DPRK held a military parade for the 65th anniversary of the Workers’ Party of Korea that was reviewed by Kim Jong Il as well as his son, Kim Jong Un, who was newly installed as a Vice Chairman of the Central Military Commission. The PRC sent Zhou Yongkang, a member of the top Standing Committee of the Politburo of the CPC to stand next to Kim Jong Il at the military parade on October 10. Days later, the PRC Defense Minister, General Liang Guanglie, hosted in Beijing a DPRK military delegation, with a meeting attended by a PLA Major General of the General Staff Department in charge of military training and arms. Later in the same month, the highest-ranking PLA officer, General Guo Boxiong, a Vice Chairman of the Central Military Commission, visited Pyongyang and met with Kim Jong Il, and in a meeting with his DPRK counterpart, Guo was not reported to raise the nuclear problem.

The PRC faced greater pressure and isolation concerning its support for North Korea. In November 2010, reports revealed that the PRC had been blocking a report by a U.N. Panel of

¹¹⁶ *Xinmin Wanbao*, Shanghai, May 17, 2010; *Korea Times*, May 28, 2010.

Experts on the DPRK's supplies to the nuclear programs of Syria, Iran, and Burma.¹¹⁷ Russian President Dmitry Medvedev, on November 10, expressed "alarm" about North Korea's nuclear ambitions. Siegfried Hecker of Stanford University saw a sophisticated DPRK uranium enrichment facility with 2,000 centrifuges in a visit on November 12.¹¹⁸ Then, on November 23, the DPRK launched an artillery attack on South Korea's Yeonpyeong Island, killing four people. On the same day, a PRC delegation went to Pyongyang and signed an economic agreement. Also on the same day, U.S. envoy Stephen Bosworth was in Beijing, and he condemned the DPRK's aggression and called the DPRK's uranium enrichment a violation of UNSC resolutions. The PRC side did not. China responded to the DPRK's provocations by again calling for "consultations" under the Six-Party Talks. While rejecting the Six-Party Talks as a substitute for changes in North Korea's behavior, the State Department shifted from calling for North Korea to comply with international obligations to calling also for China to heed its own obligations.

Obama-Hu Jintao Summit (January 2011)

After that DPRK attack and in preparing for PRC leader Hu Jintao's state visit in January 2011, the Obama Administration stepped up pressure on the PRC to restrain North Korea and influence its decisions for denuclearization. In December 2010, when General Ma Xiaotian, PLA Deputy Chief of General Staff, visited Washington for the 11th Defense Consultative Talks with Under Secretary of Defense for Policy Michele Flournoy, she and the Chairman of the Joint Chiefs of Staff, Admiral Mike Mullen, pressed the PLA side to help end North Korea's provocations and get it to show willingness to denuclearize. Admiral Mullen also publicly criticized China in December, including China's "tacit approval" of North Korea during his visit to Seoul. President Obama finally spoke with the PRC's Hu Jintao on December 5, but the White House blamed "scheduling" difficulties for the delayed discussion on North Korea. Soon after, PRC State Councilor Dai Bingguo visited Pyongyang on December 8-9. The PRC was the only country to oppose a UNSC statement on North Korea on December 19, with Russia closer to the U.S. side. Showing that it can influence the DPRK, the PRC called the next day for "maximum restraint," and the DPRK did not fire at the ROK when it held an artillery exercise. The United States had also warned North Korea through the U.N. channel in New York. However, to discuss the Korean peninsula, Deputy Secretary of State James Steinberg led a delegation to Asia (including Beijing) in December 2010, U.S. Special Representative Stephen Bosworth visited Seoul, Beijing, and Tokyo in early January 2011, and Steinberg traveled to Seoul, Tokyo, and Beijing in late January, but these trips did not include Moscow. In Beijing on January 28, Steinberg met Dai Bingguo.

In January 2011 the PLA belatedly hosted Defense Secretary Robert Gates to provide a positive atmosphere for Hu Jintao's state visit later that month. Gates expressed U.S. appreciation for PRC's help in restraining North Korea but also declared that North Korea, with its programs for nuclear weapons and ICBMs, was becoming a "direct threat" to the United States, a point that President Obama repeated to Hu at the summit. In the U.S.-PRC Joint Statement issued at Hu's visit on January 19, 2011, the PRC agreed to express "concern" about the DPRK's claimed uranium enrichment program but stopped short of saying that the program violated the September 2005 Statement and UNSC Resolutions. President Obama unilaterally said that the DPRK's uranium enrichment program was in violation of international obligations. President Obama also

¹¹⁷ *Reuters*, November 9, 2010; *Daily NK*, Seoul, November 11, 2010.

¹¹⁸ Siegfried Hecker, "A Return Trip to North Korea's Yongbyon Nuclear Complex," November 20, 2010. Also see David Albright and Paul Brannan, "Satellite Image Shows Building Containing Centrifuges in North Korea," *ISIS*, November 21, 2010; Siegfried Hecker, "What I Found in North Korea," *Foreign Affairs*, December 9, 2010.

stressed to Hu that if China did not restrain North Korea, the United States would have to increase its military presence and military exercises in Northeast Asia.¹¹⁹ The question remained about the PRC's stance on raising the matter of the DPRK's uranium enrichment at the UNSC.

Missile Technology Sales to Libya

Beginning in 2000, public reports appeared on PRC assistance to Libya's missile program. The Defense Department discovered in December 1999 that the PRC had plans to build a hypersonic wind tunnel in Libya for missile design, reported the *Washington Times* (January 21, 2000). A classified March 2, 2000, report by the NSA was said by the newspaper to describe the PRC's missile technology transfer to Libya that month, helping Libya to develop the Al Fatah SRBM with a range of 600 miles. CPMIEC allegedly began cooperating with Libya in March 1999, according to the *Washington Times* (April 13, 2000). The June 30, 2000, *Washington Times*, citing a classified NSA report, said that the PRC was training Libyan missile experts at the Beijing University of Aeronautics and Astronautics. Aside from wind tunnels, PRC aid has also covered navigational and guidance systems, reported *Jane's Defense Weekly* (February 13, 2002). The DCI's "Section 721 report" of August 2000 confirmed PRC missile assistance to Libya for the first time. The DCI's November 2003 report said that in the first half of 2003, Libya continued to depend on assistance from PRC and other "entities" for developing ballistic missiles. A report in 2004 disclosed that the Pakistani network headed by A.Q. Khan sold Libya a nuclear bomb design that originated in China, raising questions about its role in weapons proliferation.¹²⁰ However, after Libya agreed to abandon WMD programs, *Jane's Defense Weekly* reported on August 18, 2004, that inspectors found that Libya had not built a wind tunnel. The DNI's "Section 721 report" told Congress in 2006 that "firms" in China continued in 2004 to provide dual-use missile-related items, raw materials, or assistance to Libya.

Missile Technology Sales to Syria

A Pentagon report in 2001 said that PRC firms, in addition to North Korean and Russian entities, contributed equipment and technology to Syria's liquid fuel missile program.¹²¹ However, while criticizing DPRK and Russian aid to Syria's ballistic missile development, Under Secretary of State John Bolton did not cite PRC help at a speech at the Heritage Foundation on May 6, 2002. The "Section 721 reports" have not specified PRC assistance for Syria's missile program.

Missile Technology Sales to Iraq

In the unclassified "Comprehensive Report of the Special Advisor to the DCI on Iraq's WMD," issued on September 30, 2004, Charles Duelfer provided some details about Iraq's past procurement efforts from a number of countries, including China, before the war that began in 2003. The top three countries with entities receiving oil vouchers were Russia (30%), France (15%), and China (10%). "Firms in China" supplied Iraq with "limited but critical items, including gyroscopes, accelerometers, graphite, and telecommunications." In mid-2001, an

¹¹⁹ *New York Times*, January 20, 2011.

¹²⁰ Joby Warrick and Peter Slevin, "Libyan Arms Designs Traced Back to China," *Washington Post*, February 15, 2004. Also, see Bill Gertz, "Chinese Documents," *Washington Times*, September 11, 2008.

¹²¹ Secretary of Defense, *Proliferation: Threat and Response*, January 2001.

unidentified PRC firm reportedly supplied 10-20 gyros and 20 accelerometers for use in Iraq's Al-Samud ballistic missile. PRC supplies provided Iraq with "prohibited items, mainly telecommunication equipment and items with ballistic missile applications." The report referred to unnamed and named entities in China that supplied missile-related technology, including NORINCO, "Chinese High Committee for Electronic Warfare," CIEC Company, SIAM Premium Products, and CPMIEC. The report also noted that "from 2002, until the beginning of hostilities in 2003, Iraq imported rocket guidance software from China disguised as children's computer software. The software was used to guide the missiles Iraq fired at U.S. Forces in Kuwait during the initial hostilities in 2003. Iraq paid for the software with hard currency or oil."

Nonetheless, the report contended that "there is no evidence to suggest Chinese Government complicity in supplying prohibited goods to Iraq. It is likely that newly privatized state-owned companies were willing to circumvent export controls and official U.N. monitoring to supply prohibited goods." The report also alluded to indications that the PRC government had intervened in some deals to stop them.

Policy Issues and Options

Issues for Policy

Weapons proliferation by the PRC and/or its organizations raises policy issues concerning: (1) assessments of the nature and seriousness of the PRC government's role in the proliferation threat; (2) the priority of this issue relative to other U.S. interests (i.e., other security issues, Taiwan, trade, human rights); and (3) U.S. leadership and leverage (including the use of sanctions and diplomacy, and congressional actions) to obtain China's cooperation in nonproliferation.

Debate

Successive Administrations have pursued a policy of "engagement" with Beijing. Some policymakers and advocates stress a cooperative approach. In 1998, President Clinton issued certifications to implement the 1985 Nuclear Cooperation Agreement. The Clinton Administration also encouraged the PRC to join the MTCR and proposed to allow more PRC satellite launches. In November 2000, the State Department agreed to waive sanctions and consider new satellite exports in return for another missile non-proliferation pledge from China. Some officials and experts cite PRC nonproliferation statements as signs that the United States made progress in nonproliferation goals. Some also say that U.S. sanctions are counterproductive and are too broad. Rather, they assert that China needs to recognize nonproliferation for its own national interests and develop stronger export controls, perhaps with U.S. assistance. Also, some stress that China would be more cooperative if brought in to draw up "the rules." Some argue that "entities" in China largely operate without the PRC government's knowledge.

Critics argue that the "engagement" policy needs a tougher approach to counter China's activities that undermine U.S. security interests. They note that PRC weapons proliferation activities have continued and repeated PRC assurances have proved to be unreliable. Also, they say that U.S. security interests are better served with a stronger approach to stigmatize sensitive transfers, which would include some sanctions. Some argue that the United States should not subsidize China's missile and nuclear industries. These proponents tend to see U.S. leverage over China as stronger than China's influence against the United States. Some are skeptical that China sees

nonproliferation as in its national interest, since Beijing has made progress in nonproliferation commitments as part of improving relations with Washington (surrounding summits) and tried to use its sales as a form of leverage against Washington, especially on the issue of U.S. arms sales to Taiwan. They stress that PRC export controls are weak, even as government repression can be harsh (e.g., against journalists or dissidents). They also doubt that trade in sensitive nuclear weapons and missile technology can continue without the knowledge of the PRC government and/or its military, especially given the status of certain state-owned and defense-industrial enterprises as “serial proliferators.”

The PRC Government’s Role

Concerning the debate about any knowledge or approval of the PRC government, at a hearing of the Senate Armed Services Committee on March 19, 2002, DCI George Tenet told Senator Carl Levin that while PRC firms sometimes operate on their own, there are instances in which “activities are condoned by the government.” The DCI’s January 2003 “Section 721 report” to Congress noted that PRC entities could have continued contacts with Pakistani nuclear weapons facilities “without Beijing’s knowledge or permission,” but this comment was dropped from the April 2003 report. The Director of the Defense Intelligence Agency (DIA), Vice Admiral Lowell Jacoby, testified to the Senate Intelligence Committee on February 24, 2004, that PRC entities “remain involved with nuclear and missile programs in Pakistan and Iran,” while “in some cases,” the entities were involved without the government’s knowledge, implying that there were cases in which the PRC knew of the relationships. The Bush Administration repeatedly waived missile proliferation sanctions on certain activities of the PRC government (vs. “entities”).

No matter what options are pursued, many argue that U.S. leadership and a forward-looking and credible strategy are needed for dealing with China’s rising influence in world affairs. A strategic approach might underpin short-term responses to violations and use both positive and negative sources of leverage. Policy issues often center on summitry, sanctions, and satellite exports.

Foreign and Defense Policies

Summits

After the downturn in U.S.-PRC relations because of the 1989 Tiananmen crackdown, the Clinton Administration resumed high-level exchanges in 1993 and argued that “comprehensive engagement” with China advances U.S. security goals, including nonproliferation. President Clinton granted Jiang Zemin summits in Washington, on October 29, 1997, and in Beijing, on June 29, 1998. Leading up to the 1997 summit, the Administration urged China to adopt “comprehensive, nationwide regulations on nuclear export control.” China responded by implementing a set of regulations on nuclear export controls signed by Premier Li Peng on September 10, 1997. The regulations permit nuclear exports to only facilities under IAEA safeguards. China also joined the Zangger Committee (on nuclear trade) on October 16, 1997. Then, China issued new export control regulations on dual-use nuclear items on June 17, 1998. The 1998 summit in Beijing produced an agreement on non-targeting nuclear weapons, and joint statements on South Asia and on biological weapons. But China refused to join the MTCR, saying that it was “actively studying” whether to join.

President Bush raised the unresolved missile proliferation issue in Shanghai in October 2001 and in Beijing in February 2002. As Deputy Secretary of State Richard Armitage arrived in Beijing to

discuss the Bush-Jiang summit in Crawford, TX, on October 25, 2002, China, on August 25, 2002, published the missile export control regulations promised in November 2000, along with a control list that is modeled on the MTCR. In addition, on October 14, 2002, the PRC issued regulations for export controls over dual-use biological agents. China continued to approach weapon nonproliferation as more a part of the U.S.-PRC relationship than a commitment to international nonproliferation standards. At that summit, President Bush called China an “ally” in the fight against terrorism.

With the improvement in U.S.-PRC relations, however, some observers say that President Bush has not forcefully pressed China’s leaders on weapons nonproliferation as a priority issue, even while imposing numerous U.S. sanctions.¹²² Briefing reporters on President Bush’s meeting with PRC President Hu Jintao in France on June 1, 2003, a senior White House official acknowledged that the two leaders did not discuss U.S. sanctions on NORINCO (which the Administration had just imposed on May 23, 2003, for missile technology transfers to Iran) and that President Hu did not respond to Bush’s general concerns about Iran’s nuclear weapons program.¹²³ In Thailand in October 2003, at another meeting between the two presidents, Bush asserted that they had a “very constructive dialogue” on trade, Iraq, counter-terrorism, and North Korea, but he did not mention weapons proliferation as an issue with China, although the Administration had imposed another set of missile proliferation sanctions on NORINCO a month earlier.¹²⁴ While the White House hosted PRC Premier Wen Jiabao on December 9, 2003, a senior official told reporters that “the President applauded the new Chinese white paper on nonproliferation but noted that there is a need for tough implementation of the commitments contained in that white paper” (just issued on December 3, 2003, on the eve of Wen’s visit). But again, Bush did not highlight the issue of weapons proliferation with China in his public remarks.¹²⁵

Counter-Terrorism Campaign

The terrorist attacks of September 11, 2001, added a compelling U.S. interest in considering U.S. policy on PRC weapons proliferation. With questions about the viability of Pakistan’s government after it gave strong support to the anti-terrorism war, the United States could seek intelligence from the PRC about Pakistan’s nuclear weapons as well as cooperation in not further adding to instability in South Asia. Also, the Bush Administration could maintain or strengthen its response to the proliferation problem, since PRC entities have reportedly transferred nuclear, missile, and/or chemical weapons technology to sponsors of terrorism (listed by the State

¹²² For example, Robert Einhorn, former Assistant Secretary of State for Nonproliferation in the Clinton Administration, criticized the Bush Administration saying that “sanctions are used, but they are usually simply imposed rather than used as a vehicle for trying to leverage better behavior. ... There seems to be no real strategy today to try to promote continued improvement in China’s nonproliferation record,” (“China and Non-Proliferation,” *National Interest*, April 2, 2003). William Kristol, of the Project for the New American Century, in a memo to opinion leaders, dated June 4, 2003, argued that “real progress in U.S.-China relations is unlikely if the president is less than forceful and candid with his Chinese counterpart on issues of importance to the United States.” Also see Susan Lawrence, “U.S. Presses China on Arms, Quietly,” *Wall Street Journal*, October 30, 2003.

¹²³ White House, “Background Press Briefing by Senior Administration Official on the President’s Meeting with Chinese President Hu,” Evian, France, June 1, 2003.

¹²⁴ White House, “Remarks by President Bush and President Hu Jintao of China,” Bangkok, Thailand, October 19, 2003.

¹²⁵ White House, “Remarks by President Bush and Premier Wen Jiabao in Arrival Ceremony” and “Background Briefing on President’s Meeting with Chinese Premier Wen,” December 9, 2003.

Department), such as Iran. If the Administration lifts sanctions for cooperating countries, options include waiving proliferation sanctions on the PRC.

Missile Defense

On December 11, 2002, President Bush issued his National Strategy to Combat WMD, resting on the three pillars of counter-proliferation, nonproliferation, and response. The first pillar, counter-proliferation, included interdiction, deterrence, and defense (including preemptive measures and missile defenses). Some say that missile defense plays a critical role in the strategy to counter the proliferation threat. Others say the September 2001 attacks increased doubts about the likelihood of terrorists using missiles for weapons delivery. China has opposed U.S. deployment of missile defense systems and related cooperation with Japan or Taiwan and threatened to increase its nuclear missile force. China is concerned that missile defense would spur an arms race, negate its deterrence capabilities, forge closer U.S.-Taiwan military cooperation, and violate the MTCR. During Defense Secretary William Cohen's visit to China in July 2000, the PRC reportedly warned that it would continue missile proliferation activities if the United States provides missile defense to Taiwan (*Washington Post*, July 12, 2000). Also, top PRC arms control official Sha Zukang warned that the PRC would withhold cooperation on arms control and weapons nonproliferation in response to U.S. deployment of NMD, reported the *Washington Post* (July 14, 2000). Others say that PRC proliferation activities and missile buildups continued regardless.

Proliferation Security Initiative and 9/11 Commission

On May 31, 2003, in Poland, President Bush announced the Proliferation Security Initiative (PSI) to step up multinational efforts at interdiction and intelligence-sharing. The United States faces a challenge in obtaining China's cooperation in counter-proliferation (e.g., interdiction of shipments, inspections, or intelligence-sharing), given its long-lasting negative and emotional reaction to U.S. inspection in 1993 of the PRC ship, *Yinhe*, which was suspected of carrying chemicals for Iran. Also, China could doubt further the credibility of U.S. intelligence after President Bush launched the controversial war in Iraq in 2003 and failed to find WMD there.

China has not joined the PSI. China did not join the 11 original PSI members plus Norway, Denmark, Singapore, and Canada in sending representatives to a meeting in Washington on December 16-17, 2003, even though it took place just days after Premier Wen Jiabao's visit to Washington.¹²⁶ In October 2004, a PRC Foreign Ministry spokesman expressed concerns that the PSI might allow "military interception, which is beyond the limits of international law."¹²⁷ Nonetheless, Under Secretary of State for Arms Control and International Security John Bolton visited Beijing on February 16, 2004, and he revealed that "in the past several years, we have had cooperation with China in some interdiction efforts." While in Tokyo on October 27, 2004, Bolton said that "we are pleased with China's cooperation with the United States to block the export of chemicals that could have been used in North Korea's nuclear weapons programs."

The 9/11 Commission issued its final report on July 22, 2004, and it urged that the United States encourage China (and Russia) to join the PSI, among many recommendations. The 110th

¹²⁶ Department of State, "Proliferation Security Initiative: Next Experts Meeting, China's Role," December 3, 2003.

¹²⁷ "Ministry of Foreign Affairs Says China Will Not Participate in Proliferation Security Initiative," *Zhongguo Xinwen She*, October 26, 2004.

Congress considered H.R. 1, the Implementing Recommendations of the 9/11 Commission Act of 2007. The House-passed bill of January 9, 2007, noted that the Commission called on China to participate in PSI. The Senate passed its bill on July 9 without such language. The Conference Report of July 25 adopted the House provisions on the commission's recommendations and on the sense of Congress that the President should expand and strengthen the PSI. The bill became P.L. 110-53 on August 3, 2007.

Export Control Assistance

The United States may provide assistance to strengthen China's export controls, including the areas of legislation, regulations, licensing, customs, border security, and law-enforcement. The Departments of Commerce and State testified to the Senate Governmental Affairs Subcommittee on International Security, Proliferation, and Federal Services on June 6, 2002, that such bilateral exchanges were very limited.

Linkage to the Taiwan Question

Periodically, China has tried to link the issues of missile proliferation and U.S. conventional arms sales for Taiwan's self-defense. Congress has exercised oversight of the Administration's response to any direct or indirect linkage. After President George H. W. Bush approved the sale of 150 F-16A/B fighters to Taiwan in September 1992, the PRC ended its participation in the "Arms Control in the Middle East" talks. Moreover, as discussed above, in November 1992, the PRC delivered 34 M-11 missiles to Pakistan, although that transfer took place probably with prior planning and regardless of President Bush's announcement. During the 1998 summit in Beijing, the Clinton White House reportedly considered a PRC request for a U.S. pledge to deny missile defense sales to Taiwan, if China promised to stop missile sales to Iran; but no agreement was reached, reported the *Far Eastern Economic Review* (July 16, 1998). On February 26, 2002, before the Director General in charge of arms control at the PRC Foreign Ministry, Liu Jieyi, attended meetings in Washington on March 4-6, an unnamed PRC Foreign Ministry official told the *Associated Press* that the United States "can't just accuse us of violating our commitments and at the same time, sell large amounts of arms to Taiwan," since such arms sales are "also a kind of proliferation." On July 24, 2004, *Wen Wei Po*, a PRC-owned newspaper in Hong Kong, quoted an unnamed official of the Foreign Ministry as linking weapons nonproliferation to U.S. arms sales to Taiwan. Nonetheless, State Department officials said that China did not pose Taiwan as a "tactical issue" in discussions about North Korea. (See discussion on North Korea above.) Thus, for many years, the United States has faced challenges in getting China's responsible cooperation in international nonproliferation problems while continuing U.S. policy toward Taiwan, as governed by U.S. interests and the Taiwan Relations Act (TRA) of 1979, P.L. 96-8. (See CRS Report RL30957, *Taiwan: Major U.S. Arms Sales Since 1990*, by Shirley A. Kan.)

Economic Controls

Satellite Exports

There have been debates about U.S. policy using satellite exports to gain China's cooperation in missile nonproliferation. Since 1988, the policy of granting licenses to export satellites to China as well as presidential waivers of post-Tiananmen sanctions (Section 902 of P.L. 101-246) have allowed satellites to be exported for launch by China Great Wall Industry Corporation (the same

company sanctioned for missile proliferation) and—increasingly—for China’s own use. During the Clinton Administration, the National Security Council, in a purported Secret memo on bilateral talks leading up to the 1998 summit (dated March 12, 1998, and printed in the March 23, 1998, *Washington Times*), proposed to expand space cooperation, increase the number of satellite launches, issue a blanket presidential waiver of sanctions, and support China’s membership in the MTCR—in return for PRC missile export controls. On November 21, 2000, the State Department said it would waive sanctions, again process—not necessarily approve—licenses (suspended in February 2000) to export satellites to China, and discuss an extension of the bilateral space launch agreement (which later expired at the end of 2001), in return for another PRC promise on missile nonproliferation.

However, on September 1, 2001, the Bush Administration imposed sanctions for two years on the China Metallurgical Equipment Corporation (CMEC), for proliferation of missile technology to Pakistan, denying satellite exports to China. Before those sanctions expired, the State Department determined on August 29, 2003, that NORINCO substantially contributed to missile proliferation of Category II MTCR items and imposed sanctions that again effectively banned satellite exports to China. (See Sanctions below.) The last presidential waiver for satellite exports to China was issued in 1998. (See CRS Report 98-485, *China: Possible Missile Technology Transfers Under U.S. Satellite Export Policy—Actions and Chronology*, by Shirley A. Kan.)

Sanctions and the “Helms Amendment”

Policy debates concerning PRC technology transfers have often centered on the questions of whether to impose unilateral sanctions under U.S. laws, to enact new legislation to tighten mandates for sanctions or reports, or to integrate the multiple laws. Also, there have been the issues of whether to target the PRC government or PRC “entities” (usually state-owned defense industrial organizations, like **CPMIEC** or **NORINCO**) and whether the PRC government lacks the will or the capability to enforce its stated nonproliferation policy. Decisions on sanctions impact U.S. credibility and leverage on the non-proliferation issue. While certain PRC transfers might not violate any international treaties, sanctions may be required under U.S. laws that Congress passed to set U.S. nonproliferation policy and shore up nonproliferation treaties and standards. These laws, as amended, include:

- Export-Import Bank Act (P.L. 79-173)
- Arms Export Control Act (AECA) (P.L. 90-629)
- Export Administration Act (EAA) (P.L. 96-72)
- Nuclear Proliferation Prevention Act (Title VIII of P.L. 103-236)
- Iran-Iraq Arms Nonproliferation Act (P.L. 102-484)
- Iran Nonproliferation Act (P.L. 106-178); that became the Iran, North Korea, and Syria Nonproliferation Act (P.L. 109-353)
- Executive Order 12938, as amended by Executive Order 13094
- Executive Order 13382
- Iran Sanctions Act of 1996 (P.L. 104-172); expanded by the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010 (P.L. 111-195).

(On legislation requiring sanctions, see also CRS Report RL31502, *Nuclear, Biological, Chemical, and Missile Proliferation Sanctions: Selected Current Law*, by Dianne E. Rennack.)

Underlying the question of whether sanctions should be used are disagreements about the most effective approach for curbing dangerous PRC sales and promoting U.S. interests and leadership. Some argue that a cooperative approach, rather than sanctions, is more effective. Others say that current sanctions are not effective in countering the PRC's proliferation practices (especially with certain entities being repeatedly sanctioned, negligible penalties, and sanctions targeting companies but not the government) and that legislation requiring sanctions should be toughened. Still others say sanctions stigmatize countries, signal U.S. resolve, and shore up U.S. credibility on this important security problem. Another approach is to use senior-level diplomacy to achieve goals along with sanctions to deter proliferation. In any case, by 2006, China's government and state-owned defense industrial corporations under U.S. sanctions started to seek U.S. training to strengthen export controls and nonproliferation practices. (See discussion below on training and Internal Compliance Programs (ICPs).) This evolution showed that U.S. sanctions worked, with negative impacts on the business of sanctioned entities. Still, any real improvement in policies and practices in response to sanctions could be a basis for lifting sanctions.

As for whether to impose or waive missile proliferation sanctions, on November 21, 2000, the Clinton Administration agreed to waive missile proliferation sanctions, again process—not necessarily approve—licenses to export satellites to China, and discuss an extension of the bilateral space launch agreement, in return for a new PRC pledge on missile nonproliferation and a promise to issue missile export controls.

However, continued PRC transfers again raised the issue of imposing sanctions. By July 2001, the United States formally protested to China about its compliance with the agreement, reported the *Washington Post* (July 27, 2001). Visiting Beijing ahead of President Bush's trip to Shanghai in October 2001, Secretary of State Colin Powell, on July 28, 2001, noted "outstanding issues" about China's implementation of its November 2000 commitment.

In contrast to the Clinton Administration, the Bush Administration repeatedly imposed sanctions on PRC "entities" (but not the PRC government) for transfers (related to ballistic missiles, chemical weapons, and cruise missiles) to Pakistan and Iran, under the Arms Export Control Act, Export Administration Act, Iran Nonproliferation Act of 2000, Iran-Iraq Arms Nonproliferation Act of 1992, Executive Order 12938, and Executive Order 13382. (See **Table 1: PRC Entities Sanctioned for Weapons Proliferation**.) About half of the PRC entities, "serial proliferators," have faced repeated sanctions, raising questions about effectiveness.

Among the actions, on September 1, 2001, the Bush Administration imposed sanctions (for two years) on a PRC company, the China Metallurgical Equipment Corporation (CMEC), for proliferation of missile technology (Category II items) to Pakistan. The sanctions had the effect of denying licenses for two years for the export of satellites to China for its use or launch by its aerospace entities, because the Category II sanctions deny U.S. licenses to transfer missile equipment or technology (MTCR Annex items) to any PRC "person," which is defined by the so-called "Helms Amendment" (Section 74(a)(8)(B) of the AECA, P.L. 90-629) as all PRC government activity affecting the development or production of missiles, electronics, space systems, and military aircraft, and the State Department considers that satellites are covered by the MTCR Annex (since it includes satellite parts).

In Beijing with the President in February 2002, National Security Advisor Condoleezza Rice said that the PRC should stop “grandfathering” contracts signed before November 2000. On August 25, 2002, the PRC published missile export control regulations (promised in November 2000), just before Deputy Secretary of State Richard Armitage arrived in Beijing to discuss an upcoming Bush-Jiang summit, showing that China still viewed nonproliferation in the context of relations with the United States. Armitage welcomed the new regulations but added that further discussions were needed. The State Department spokesperson stressed that questions remained about enforcement of the controls and reductions in PRC proliferation practices. With questions about enforcement and effectiveness of the controls, President Bush did not waive the sanctions imposed in September 2001.

Moreover, the regulations raised a number of questions, including the roles of the Ministry of Foreign Trade and Economic Cooperation (MOFTEC) and Ministry of Foreign Affairs. Part 1 of that control list (missiles and other delivery systems) and dual-use items (in Part 2) for military use are subject to the Regulations on Administering Arms Exports issued in 1997, under the jurisdiction of the State Council and Central Military Commission (China’s military command of the Communist Party of China). Also, unlike the MTCR, the PRC’s regulations on missile-related exports do not state a strong presumption to deny transfers of Category I items or any missiles or other items judged to be intended to deliver any WMD.

In the 107th Congress, Senator Fred Thompson inserted a section in the FY2003 National Defense Authorization Act (enacted on December 2, 2002, as Section 1209 in P.L. 107-314) to require the DCI to submit semi-annual reports that identify PRC and other foreign entities contributing to weapons proliferation. However, in his signing statement, President Bush stated that he would construe this and several other sections in a manner consistent with the President’s constitutional authority to “withhold information,” if disclosure could harm foreign relations, national security, or the Executive Branch’s duties.

Before the September 2001 sanctions expired, the State Department determined on August 29, 2003, that **NORINCO** substantially contributed to missile proliferation of Category II MTCR items in a publicly unidentified country and imposed sanctions for two years that banned the issuance to NORINCO of export licenses or U.S. government contracts for missile equipment or technology, and that banned the importation of NORINCO’s products. Complicating U.S. considerations, the “Helms Amendment” again applied—denying exports of satellites to China. But the Bush Administration contended that it was “essential to national security” to waive for one year the sanction on imports when applied to other PRC government activities relating to missiles, electronics, space systems, and military aircraft. The sanctions took effect on September 19, 2003. Within a year, the Administration had to decide on the broader sanctions on imports of non-NORINCO products, which could have affected an estimated \$12 billion in imports from the PRC, according to one estimate.¹²⁸ After the one-year waiver passed, the State Department, for five times, extended the waiver on the import sanction against certain activities of the PRC government for six more months and permanently waived the sanction in March 2007. However, the Bush Administration did not point to any new nonproliferation cooperation from China.

Still, by 2006, China’s government and defense-industrial corporations started to seek U.S. training (from the University of Georgia) to improve export controls and nonproliferation

¹²⁸ Susan Lawrence, “Duel Over Sanctions,” *Far Eastern Economic Review*, November 6, 2003; and author’s interview with State Department official, November 2003.

practices. Sanctioned entities such as NORINCO and CMEC set up their own Internal Compliance Program (ICP), working with the Ministries of Foreign Affairs and Commerce as well as the Commission of Science, Technology, and Industry for National Defense (COSTIND). In December 2008, NORINCO and CMEC's presidents signed their companies' statements on adherence to weapons nonproliferation, export control, and internal compliance.

Options for Congress include: maintaining, deleting, or amending the "Helms Amendment," such as changing the language that broadly covers "electronics" or a review by the Commerce Department on whether to change China's "non-market economy" status, based upon which the "Helms Amendment" has broadened missile proliferation sanctions.

Another question for congressional oversight concerned whether the Executive Branch enforced sanctions that already were imposed, particularly import bans. In late 2009 and early 2010, the Wisconsin Project on Nuclear Arms Control and the *Wall Street Journal* reported that sanctioned PRC entities, including sub-units of CPMIEC and LIMMT Economic and Trade Co., exported products to U.S. firms or through U.S. ports to other countries after 2006.¹²⁹ Afterwards, the Treasury Department's Office of Foreign Assets Control named for sanctions the CPMIEC Shanghai Pudong Company (aka China JMM Import and Export Shanghai Pudong Corporation).

Capital Markets

During the 106th Congress, in May 2000, Senator Fred Thompson, along with Senator Robert Torricelli, introduced S. 2645, the "China Nonproliferation Act," to require annual reviews (based on "credible information"), sanctions, and use of the U.S. securities market as a policy tool. In September 2000, the Senate passed (65-32) a motion to table the legislation as an amendment to the bill granting China permanent normal trade relations (PNTR) status. In the 107th Congress, Senator Thompson inserted a section in the FY2003 Intelligence Authorization Act (enacted on November 27, 2002, as Section 827 in P.L. 107-306) to require the DCI to submit annual reports on PRC and other foreign companies that are involved in weapons proliferation and raise funds in U.S. capital markets. Reporting the bill on May 13, 2002, the Senate Intelligence Committee (in S.Rept. 107-149) added that it did not intend to restrict access to those markets. The 108th Congress passed the FY2004 Intelligence Authorization Act (P.L. 108-177) that included Section 361(e) to repeal the above reporting requirement.

Nuclear Cooperation and U.S. Export of Reactors

After the PRC promised not to start new nuclear cooperation with Iran on the eve of the 1997 U.S.-China summit, President Clinton, on January 12, 1998, signed certifications (as required by P.L. 99-183) on China's nuclear nonproliferation policy and practices to implement the 1985 Nuclear Cooperation Agreement. According to President Clinton, the agreement would serve U.S. national security, environmental, and economic interests, and "the United States and China share a strong interest in stopping the spread of weapons of mass destruction and other sophisticated weaponry in unstable regions and rogue states—notably, Iran." The President also waived a sanction imposed after the Tiananmen crackdown (in P.L. 101-246). Later, at the 1998 summit, the Department of Energy (DOE) and the PRC State Planning Commission signed an agreement

¹²⁹ Matthew Godsey, "Chinese Companies Evade U.S. Trade Ban," Wisconsin Project on Nuclear Arms Control, December 15, 2009; Peter Fritsch, "Chinese Evade U.S. Sanctions on Iran," *Wall Street Journal*, January 4, 2010.

on peaceful nuclear cooperation, including bringing PRC scientists to U.S. national labs, universities, and nuclear facilities.

On February 28, 2005, Westinghouse submitted a bid to sell four AP1000 nuclear power reactors to China, with the NRC's approval. The Bush Administration supported Westinghouse's bid to sell nuclear reactors to China. However, critics said that the United States, including its Export-Import Bank, should not support nuclear exports to China, given proliferation concerns. On June 28, 2005, Representative Bernard Sanders introduced Amendment 381 to the Foreign Operations, Export Financing, and Relations Programs Appropriations Act for FY2006 (H.R. 3057) to prohibit funds from being used by the Export-Import Bank to approve an application for a loan or loan guarantee for a nuclear project in the PRC. The House adopted the amendment (313-114) and passed H.R. 3057 on June 28, 2005, with the language in Section 589. However, this section was dropped in the conference committee (H.Rept. 109-265). While in Beijing on December 16, 2006, Secretary of Energy Samuel Bodman signed a bilateral Memorandum of Understanding that granted the deal to Westinghouse. (See CRS Report RL33192, *U.S.-China Nuclear Cooperation Agreement*, coordinated by Shirley A. Kan.)

U.S. Import Controls

While sanctions may affect U.S. exports, some policy steps may affect imports of products produced by PRC military or defense-industrial companies suspected of contributing to proliferation. Import controls have been included as possible sanctions for missile proliferation under Section 73(a)(2)(C) of the AECA and Section 11B(b)(1)(B)(iii) of the EAA, as well as affected by what is popularly called the "Helms Amendment," giving a broad definition of "person" as a target of sanctions. Issues include whether to sanction imports and what the parameters should be.

U.S. Export Controls

Export controls are a possible policy tool, because U.S. technology provides one source of leverage with respect to Beijing. After the Cold War, U.S. export restrictions have been re-focused to the threat of WMD and missiles. Some in Congress are concerned about U.S. technology reaching hostile states with WMD programs through China. U.S. arms sales to China have been banned under sanctions imposed after the 1989 Tiananmen Crackdown (in the Foreign Relations Authorization Act for FY1990-1991, P.L. 101-246), but there are competing economic interests in exporting dual-use technology.

Nonproliferation and Arms Control

Nonproliferation Regimes (MTCR, NSG, etc.)

Another policy approach is to strengthen the international nonproliferation regimes. There are two prongs in such efforts: (1) encouraging PRC support for strengthening the regimes (e.g., the IAEA's verification authority) to enforce compliance and (2) filling gaps in China's participation. Some say that efforts to include China would capitalize on its desire to be treated as a "great power" and to be perceived as a responsible world leader. In addition, they stress that China would be more cooperative if it helped to draw up the "rules." Others argue that China's participation would risk its obstruction of tighter export controls, possible derailing of arms control efforts, linkage of nonproliferation issues to the Taiwan issue, and access to intelligence-

sharing. One basis for this view is the experience with the Arms Control in the Middle East effort in the early 1990s, in which China refused to cover missiles in the effort and later suspended its participation after President George H.W. Bush decided in 1992 to sell Taiwan F-16 fighters.

Options for U.S. policy have included support or opposition to China joining the MTCR (as a member after it establishes a record of compliance and effective export controls), Nuclear Suppliers Group (NSG), Australia Group (on chemical and biological weapons), Wassenaar Arrangement (military and dual-use export controls), and International Code of Conduct Against Ballistic Missile Proliferation. Previously, President Clinton's National Security Council, in a purported Secret memo, dated March 12, 1998 (printed in the March 23, 1998, *Washington Times*), proposed in a "China missile deal" to expand space cooperation with Beijing, increase the number of satellites that China can launch, issue a blanket presidential waiver of post-Tiananmen sanctions on satellite launches, and support China's membership in the MTCR—in return for effective PRC missile export controls.

Critics say that membership in the MTCR would exempt China from certain sanctions, provide it with intelligence, give it a potentially obstructionist role in decision-making, and relax missile-related export controls to China. In September 1999, Congress passed the FY2000 National Defense Authorization Act (P.L. 106-65), stating its sense that the President shall take steps to obtain an agreement with the PRC on adherence to the MTCR and its annex and that the PRC should not be allowed to join the MTCR without meeting certain conditions. It also required a report on the PRC's adherence to the MTCR. The classified report was submitted on August 18, 2000. In 2004, China applied to join the MTCR but was not accepted as a member, according to the DNI's "Section 721 report" to Congress of 2006.

China joined the Zangger Committee (on nuclear trade) in October 1997, before a summit in Washington. Also, China issued new export control regulations on dual-use nuclear items on June 17, 1998, before another summit in Beijing.

For years, China was the only major nuclear supplier to shun the multinational NSG, which requires "full-scope safeguards" (IAEA inspections of *all* other declared nuclear facilities in addition to the facility importing supplies to prevent diversions to weapon programs). In January 2004, China applied to join the NSG. However, on May 5, 2004, China signed a contract to build a second nuclear power reactor (Chashma-2) in Pakistan. This contract raised questions because of continuing PRC nuclear cooperation with Pakistan and its signing right before a decision by the NSG on China's membership. With a pre-existing contract, Chashma-2 would be exempted from the NSG's requirement for full-scope safeguards.¹³⁰ The Bush Administration supported China's membership, after reportedly strident debate between officials who questioned China's commitment to nonproliferation and those who wanted to encourage China's cooperation.¹³¹

On May 18, 2004, the House International Relations Committee held a hearing to question whether the Administration should support China's membership in the NSG, given concerns about PRC nuclear cooperation with Pakistan and Iran, about whether China would be a spoiler in the NSG, and about loss of U.S. leverage. Assistant Secretary of State John Wolf testified that the United States has urged China to join the NSG since 1995, that China has not been a spoiler in the Zangger Committee, and that NSG membership would add multilateral influence on China's

¹³⁰ "Pakistan, China Agree on Second Chashma Unit," *Nucleonics Week*, May 6, 2004.

¹³¹ Carol Giacomo, "U.S. Backs China Joining Nuclear Group," *Reuters*, May 11, 2004.

nuclear technology export policies. Wolf conceded, however, that Pakistan has a nuclear weapons program and does not accept full-scope safeguards, and that the United States prefers that no country provide Pakistan with benefits of peaceful nuclear cooperation. He noted that the Chashma-2 plant will be under IAEA safeguards, but the NSG exempts full-scope safeguards for contracts signed before NSG membership. Wolf also acknowledged that the Administration did not request that China use its influence with Islamabad to secure tighter Pakistani export controls. Moreover, he conceded that the Administration has not seen the contract for Chashma-2 nor received the requested “full information” on any ongoing nuclear cooperation projects that China seeks to grandfather. A memo dated May 26, 2004, by the Project for the New American Century criticized the Administration’s decision for turning a “blind eye to China’s reactor sales to Pakistan.” The NSG decided at a meeting on May 28 to accept China as a member.

CTBT, Fissile Materials, and Nuclear Security

China, on July 30, 1996, began a moratorium on nuclear testing and signed the Comprehensive Test Ban Treaty (CTBT) on September 24, 1996. However, after the U.S. Senate rejected (51-48) the treaty on October 13, 1999, it became doubtful that the PRC would ratify the CTBT. Also, the United States has sought PRC cooperation on negotiating a global ban on the production of fissile materials for nuclear weapons and other nuclear explosive devices. On October 4, 1994, the United States and China agreed to “work together to promote the earliest possible achievement of a multilateral, non-discriminatory, and effective verifiable convention” banning fissile materials production. The PRC could follow if the United States ratified the CTBT. President Obama issued a U.S.-PRC Joint Statement at the Obama-Hu summit in Beijing on November 17, 2009, in which the two countries committed to pursue “ratification” of the CTBT “as soon as possible,” to work together for the early entry into force of the CTBT, and to support the launching of negotiations on the Fissile Material Cut-off Treaty. At Hu Jintao’s state visit in Washington on January 19, 2011, the U.S.-PRC Joint Statement did not mention ratification in calling again for the early entry into force of the CTBT. The two countries reaffirmed cooperation based on the Nuclear Security Summit in Washington in April 2010 (attended by Hu Jintao) and signed a Memorandum of Understanding to set up a “Center of Excellence on Nuclear Security” in China.

Meanwhile, Congress passed the **National Defense Authorization Act for FY2011** (enacted as **P.L. 111-383** on January 7, 2011) with Section 1303 that limited the use of funds to no more than \$500,000 in FY2011 under the Cooperative Threat Reduction program to set up a center of excellence in any country outside of the former Soviet Union until 15 days after the Defense Secretary submitted a report with required information to Congress. Also, Section 1304 required the Secretaries of Defense and Energy to submit by April 1, 2011, a plan to Congress concerning activities with the PRC under the Cooperation Threat Reduction Program and Defense Nuclear Nonproliferation Program during FYs 2011 through 2016, including costs paid by the PRC.

Intermediate-range Nuclear Forces (INF) Treaty

Under the 1987 Treaty on the Elimination of Intermediate-Range and Shorter-Range Missiles (INF Treaty) with the Soviet Union, the United States eliminated by 1991 all ground-launched ballistic and cruise missiles with ranges between 500 and 5,500 km. By 2010, China had the world’s most active land-based ballistic and cruise missile program, including development of the world’s only anti-ship ballistic missile (ASBM). An option as proposed by former officials in

2011 called for expansion of the INF Treaty to include China, as a response to the instability raised by its missile buildup for Taiwan, Asian allies, the United States, and others.¹³²

International Lending

Congress might seek to link U.S. support for loans made by international financial institutions to China's nonproliferation record. The Iran-Iraq Arms Nonproliferation Act requires U.S. opposition to multilateral loans for sanctioned countries (Section 1605(b)(2)). Coordination with Japan would be appropriate, since it provides the most significant bilateral aid to China and, in 1995, Japan was the only country to cut aid to pressure China to stop nuclear testing. By 2005, some in Congress increasingly questioned the World Bank's continued lending to China despite the government's wealth of funds.¹³³ The World Bank extended \$1 billion in total loans to China in the bank's fiscal year of 2005.

¹³² Mark Stokes (Project 2049) and Dan Blumenthal (AEI), "Why China's Missiles Should be Our Focus," *Washington Post*, January 2, 2011.

¹³³ William McQuillen, "World Bank Loans to China Draw Criticism from U.S. Congressmen," *Bloomberg*, August 4, 2005; and discussions by the author and other congressional staffers in a delegation in Beijing in August 2005.

Table I. PRC Entities Sanctioned for Weapons Proliferation

Entity/Person (or successor, sub-unit, subsidiary)	Reason: Statutes	Effective Dates
<ul style="list-style-type: none"> - China Great Wall Industry Corporation - China Precision Machinery Import/Export Corp. (CPMIEC) 	Missile Proliferation: §73(a)(2)(A), Arms Export Control Act §11B(b)(1)(B)(i), Export Administration Act (Category II items in MTCR Annex to Pakistan)	June 25, 1991 waived on March 23, 1992
Ministry of Aerospace Industry, including CPMIEC, and related entities, including: <ul style="list-style-type: none"> - China National Space Administration - China Aerospace Corp. - Aviation Industries of China - CPMIEC - China Great Wall Industry Corp. or Group - Chinese Academy of Space Technology - Beijing Wan Yuan Industry Corp. (aka Wanyuan Company or China Academy of Launch Vehicle Technology) - China Haiying Company - Shanghai Astronautics Industry Bureau - China Chang Feng Group (aka China Changfeng Company) 	Missile Proliferation: §73(a)(2)(A), Arms Export Control Act §11B(b)(1)(B)(i), Export Administration Act (Category II items in MTCR Annex to Pakistan)	August 24, 1993 waived on November 1, 1994

Entity/Person (or successor, sub-unit, subsidiary)	Reason: Statutes	Effective Dates
5 PRC citizens: - Liao Minglong - Tian Yi - Chen Qingchang (aka Q.C. Chen) - Pan Yongming - Shao Xingsheng 2 PRC companies: - Nanjing Chemical Industries Group - Jiangsu Yongli Chemical Engineering and Technology Import/Export Corp. 1 Hong Kong company: - Cheong Yee Ltd.	CW Proliferation: §81(c), Arms Export Control Act §11C(c), Export Administration Act (dual-use chemical precursors, equipment, and/or technology to Iran)	May 21, 1997
Jiangsu Yongli Chemicals and Technology Import/Export Corp.	CW/BW Proliferation: §3, Iran Nonproliferation Act	June 14, 2001 for two years
China Metallurgical Equipment Corp. (aka CMEC, MECC)	Missile Proliferation: §73(a)(2)(A), Arms Export Control Act §11B(b)(1)(B)(i), Export Administration Act (MTCR Category II items to Pakistan)	September 1, 2001 for two years
- Liyang Chemical Equipment - China Machinery and Electric Equipment Import/Export Co. - Q.C. Chen	CW/BW Proliferation: §3, Iran Nonproliferation Act (Australia Group controls)	January 16, 2002 for two years

Entity/Person (or successor, sub-unit, subsidiary)	Reason: Statutes	Effective Dates
<ul style="list-style-type: none"> - Liyang Yunlong (aka Liyang Chemical Equipment Co.) - Zibo Chemical Equipment Plant (aka Chemet Global Ltd.) - China National Machinery and Electric Equipment Import and Export Co. - Wha Cheong Tai Co. - China Shipbuilding Trading Co. - CPMIEC - China Aero-Technology Import/ Export Corp. (CATIC) - Q.C. Chen 	Weapons Proliferation: §3, Iran Nonproliferation Act (AG-controlled items and conventional weapons-related technology related to unspecified missiles)	May 9, 2002 for two years
<ul style="list-style-type: none"> - Jiangsu Yongli Chemicals and Technology Import Export Corp. - Q.C. Chen - China Machinery and Equipment Import Export Corp. - China National Machinery and Equipment Import Export Corp. - CMEC Machinery and Electric Equipment Import Export Co. - CMEC Machinery and Electrical Import Export Co. - China Machinery and Electric Equipment Import Export Co. - Wha Cheong Tai Co. 	Weapons Proliferation: §1604(b), Iran-Iraq Arms Non-Proliferation Act and §81(c), Arms Export Control Act §11C(c), Export Administration Act (chemical weapons technology to Iran)	July 9, 2002 for two years for one year
<ul style="list-style-type: none"> - China Shipbuilding Trading Co. 	only under Iran-Iraq Arms Nonproliferation Act (cruise missile technology)	

Entity/Person (or successor, sub-unit, subsidiary)	Reason: Statutes	Effective Dates
North China Industries Corporation (NORINCO)	Missile Proliferation: Executive Order 12938 (amended by Executive Order 13094) (missile technology to Iran)	May 23, 2003 for two years
<ul style="list-style-type: none"> - Taian Foreign Trade General Corporation - Zibo Chemical Equipment Plant - Liyang Yunlong Chemical Equipment Group Company - NORINCO - CPMIEC 	Missile Proliferation: §3, Iran Nonproliferation Act	June 26, 2003 for two years
CPMIEC	Missile Proliferation: Executive Order 12938 (as amended by Executive Order 13094) (missile technology to publicly unnamed country)	July 30, 2003 for indefinite period
NORINCO	Missile Proliferation: §73(a)(2)(A) and (C), Arms Export Control Act §118(b)(1)(B)(i) and (iii), Export Administration Act (Substantial contribution in proliferation of MTCR Category II technology to publicly unnamed country)	September 19, 2003 for two years; waived for one year on import ban for non-NORINCO products; waiver extended on September 18, 2004, for six months; waived for six months on March 18, 2005; waived for six months on September 18, 2005; waived for six months on March 18, 2006; waived on September 18, 2006, for six months; permanently waived on March 18, 2007.
<ul style="list-style-type: none"> - Beijing Institute of Opto-Electronic Technology (BIOET) - NORINCO - CPMIEC - Oriental Scientific Instruments Corporation (OSIC) - Zibo Chemical Equipment Plant (aka Chemet Global Ltd., South Industries Science and Technology Trading Company) 	Weapons Proliferation: §3, Iran Nonproliferation Act (unspecified transfers to Iran controlled under multilateral export control lists or having the potential to make a material contribution to WMD or cruise or ballistic missiles)	April 1, 2004 for two years

Entity/Person (or successor, sub-unit, subsidiary)	Reason: Statutes	Effective Dates
- Xinshidai (aka China Xinshidai Company, XSD, China New Era Group, or New Era Group)	Missile proliferation: Executive Order 12938 (as amended by Executive Order 13094) (material contribution to missile proliferation in publicly unnamed country)	September 20, 2004 for two years
- Beijing Institute of Aerodynamics - BIOET - China Great Wall Industry Corporation - NORINCO - LIMMT Economic and Trade Company, Ltd. - OSIC - South Industries Science and Technology Trading Co.	Weapons Proliferation: §3, Iran Nonproliferation Act (unspecified transfers to Iran controlled under multilateral export control lists or having the potential to make a material contribution to WMD or cruise or ballistic missiles)	September 23, 2004 for two years
- Liaoning Jiayi Metals and Minerals Co. - Q.C. Chen - Wha Cheong Tai Co. Ltd. - Shanghai Triple International Ltd.	Weapons Proliferation: §3, Iran Nonproliferation Act (unspecified transfers to Iran controlled under multilateral export control lists or having the potential to make a material contribution to WMD or cruise or ballistic missiles)	November 24, 2004 for two years
- Beijing Alite Technologies Company Ltd. - CATIC - China Great Wall Industry Corporation - NORINCO - Q.C. Chen - Wha Cheong Tai Company (aka Wah Cheong Tai Co., Hua Chang Tai Co.) - Zibo Chemet Equipment Corp. (aka Chemet Global Ltd)	Weapons Proliferation: §3, Iran Nonproliferation Act (unspecified transfers to Iran controlled under multilateral export control lists or having the potential to make a material contribution to WMD or cruise or ballistic missiles)	December 27, 2004 for two years

Entity/Person (or successor, sub-unit, subsidiary)	Reason: Statutes	Effective Dates
-CATIC -NORINCO -Hongdu Aviation Industry Group -LIMMT Metallurgy and Minerals Company Ltd. -Ounion (Asia) International Economic and Technical Cooperation Ltd. -Zibo Chemet Equipment Company	Missile and CW Proliferation: §3, Iran Nonproliferation Act (unspecified transfers to Iran controlled under multilateral export control lists or having the potential to make a material contribution to WMD or cruise or ballistic missiles)	December 23, 2005 for two years
-Beijing Alite Technologies Company Ltd. (ALCO) -LIMMT Economic and Trade Company Ltd. -China Great Wall Industry Corporation (CGWIC) -CPMIEC -G.W. Aerospace (a U.S. office of CGWIC)	Missile Proliferation: Executive Order 13382 (transfers to Iran's military and other organizations of missile and dual-use components, including items controlled by the MTCR)	June 13, 2006 On June 19, 2008, sanctions lifted against CGWIC and G.W. Aerospace
Great Wall Airlines (aka Changcheng Hangkong)	Missile Proliferation: Executive Order 13382 (unspecified transfers probably to Iran)	August 15, 2006 lifted on December 12, 2006
-China National Electronic Import-Export Company -CATIC -Zibo Chemet Equipment Company	Weapons Proliferation: §3, Iran, North Korea, and Syria Nonproliferation Act (unspecified transfers to Iran controlled under multilateral export control lists or having the potential to make a material contribution to WMD or cruise or ballistic missiles)	December 28, 2006 for two years
-CPMIEC -Shanghai Non-Ferrous Metals Pudong Development Trade Company Ltd. -Zibo Chemet Equipment Company	Weapons Proliferation: §3, Iran, North Korea, and Syria Nonproliferation Act (unspecified transfers to Iran controlled under multilateral export control lists or having the potential to make a material contribution to WMD or cruise or ballistic missiles)	April 17, 2007 for two years

Entity/Person (or successor, sub-unit, subsidiary)	Reason: Statutes	Effective Dates
-China Xinshidai Company -China Shipbuilding and Offshore International Corporation -Huazhong CNC	Weapons Proliferation: §3, Iran, North Korea, and Syria Nonproliferation Act (unspecified transfers controlled under multilateral export control lists or having the potential to make a material contribution to WMD or cruise or ballistic missiles)	October 23, 2008 for two years
-Dalian Sunny Industries (aka LIMMT Economic and Trade Company, LIMMT (Dalian) Metallurgy and Minerals Company, and LIMMT (Dalian FTZ) Economic and Trade Organization) -Bellamax	Missile Proliferation: §73(a)(1), Arms Export Control Act §11B(b)(1), Export Administration Act	February 2, 2009 for two years Waived for PRC government activities related to missiles, electronics, space systems, and military aircraft
-Dalian Sunny Industries (aka LIMMT Economic and Trade Company, LIMMT (Dalian) Metallurgy and Minerals Company, and LIMMT (Dalian FTZ) Economic and Trade Organization) -Bellamax	Missile Proliferation: Executive Order 12938	February 2, 2009 for two years
-Fangwei LI (aka Karl LEE), c/o LIMMT Economic and Trade Company	Missile Proliferation: Executive Order 13382	April 7, 2009
-Karl LEE -Dalian Sunny Industries (aka LIMMT (Dalian) Metallurgy and Minerals Co., LIMMT (Dalian) Economic and Trade Organization, Liaoning Industry and Trade Co.) -Shanghai Technical By-Products International (STBPI) -Zibo Chemet Equipment Company	Weapons Proliferation: §3, Iran, North Korea, and Syria Nonproliferation Act (unspecified transfers controlled under multilateral export control lists or having the potential to make a material contribution to WMD or cruise or ballistic missiles)	July 14, 2010 for two years

Note: This table summarizes the discussion of sanctions in this CRS Report and was compiled based on publication of notices in the *Federal Register*, reports and statements of the Administration, legislation enacted by Congress, and news reports.

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