

TESTIMONY
OF
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HEARING ON CHINA'S PROLIFERATION PRACTICES AND ITS ROLE
IN THE NORTH KOREA NUCLEAR CRISIS
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Thank you for the opportunity to testify before the commission on these important issues. The U.S.-China bilateral relationship is critical for U.S. interests in much of the world. There are a number of indicators that can help us determine whether China is a status quo power or a revisionist state seeking to challenge the United States in the future. Among these indicators are China's nonproliferation and export control policies, which have the potential to help alleviate or to exacerbate security dynamics in several regions.

This written statement will review the evolution of China's arms control and nonproliferation policy since the 1990s, examine China's export control system, evaluate the motivations and micro-incentives for some Chinese proliferators, and conclude with an assessment of China's role in persuading North Korea to abandon its nuclear ambitions.

EVOLUTION OF CHINESE ARMS CONTROL AND
NONPROLIFERATION POLICY SINCE THE EARLY 1990S

Chinese arms control and nonproliferation policy underwent the most significant changes in the 1990s.² These include Beijing's accession to major international arms control and nonproliferation treaties and the introduction of domestic regulations governing exports of nuclear, chemical and dual-use materials and technologies. These developments were prompted by Beijing's growing recognition of proliferation threats; an acute concern over its international image; its assessment of how progress in nonproliferation could promote better U.S.-China bilateral relations; and by U.S. nonproliferation initiatives aimed at influencing Chinese behavior.³

An important indicator of China's acceptance of international nonproliferation norms can be found in its participation in major international treaties and conventions. Since the early 1990s, China has acceded to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) in 1992, signed (1993) and ratified (1997) the CWC, and signed the Comprehensive Test Ban Treaty (1996). Beijing has on various occasions enunciated in clear terms the three

principles governing its nuclear exports: (1) IAEA safeguards; (2) peaceful use; and (3) no re-transfers to a third country without China's prior consent. In May 1996, the Chinese government further pledged not to provide assistance to un-safeguarded nuclear facilities. In October 1997, China formally joined the Zangger Committee. In May 2004, China joined the Nuclear Suppliers Group (NSG). Beijing is engaged in consultation with the other multilateral export control regimes—the Missile Technology Control Regime (MTCR), the Australia Group (AG), and the Wassenaar Arrangement (WA).⁴

Beijing has also reached a number of bilateral agreements and understandings with the United States pledging adherence to the original 1987 MTCR guidelines, including a commitment not to export missiles “inherently capable of reaching a range of at least 300 km with a payload of at least 500 kg.”⁵ In addition, China has promised that it would not assist states in developing “ballistic missiles that can be used to deliver nuclear weapons” and that it would issue “at an early date” a “comprehensive” list of missile-related and dual-use items that would require government licenses for export.⁶ In November 2000, the Chinese Foreign Ministry issued a policy statement on missile nonproliferation whereby Beijing promised to issue export control laws covering missile technologies and that the new laws would include such regulations as license application and review, end-user certifications, and a “catch-all” clause.⁷

Beijing thus has become more active and participatory in multilateral arms control and nonproliferation forums, ranging from the Conference on Disarmament (CD) to the UN First Committee ((Disarmament and International Security) and the International Atomic Energy Agency. From the late 1990s to 2002, Chinese officials launched intense diplomatic offensives at various international forums to warn against the adverse consequences for global arms control and nonproliferation efforts should U.S. missile defense plans be implemented, and to emphasize the importance of preventing an arms race in outer space. At the United Nations, China, in collaboration with Russia and other countries opposing U.S. missile defense, pushed through a non-binding resolution on sustaining the 1972 Anti-Ballistic Missile Treaty and preventing weaponization in outer space. At the Conference on Disarmament, Beijing has been active in pushing for the negotiation of an international treaty to ban weaponization in outer space.

CHINA'S EXPORT CONTROL SYSTEM

Beginning with the May 1994 Foreign Trade Law, the Chinese government has issued a series of regulations, decrees, and circulars that, taken together, constitute a nascent export control system.⁸ In April 1997, a new Department of Arms Control and Disarmament was established within the Ministry of Foreign Affairs (MFA). There has been increasing coordination among MFA, MOFCOM/MOFTEC (Ministry of Commerce/Ministry of Foreign Trade and Economic Cooperation), COSTIND/CAEA (Commission on Science and Technology, and Industry for National Defense/China Atomic Energy Agency), and the PLA's General Armament Department officials in implementing export control regulations.⁹ Non-governmental research and outreach organizations have also emerged as China's participation in global, multilateral, and regional arms control has increased.¹⁰

However, China's nonproliferation and export policies continue to be affected by political and economic factors that slow progress in establishing a strong, viable system. Recently, Beijing has begun to clarify the lines of authority, and create a stronger legal basis for its nonproliferation and export control policies. Chinese leaders are paying more attention to export controls as indicated by the State Council's White Paper on Nonproliferation published in December 2003. This publication highlighted the challenges facing China's export control system and showed that Beijing has become more serious about the issue.¹¹

Beijing's promulgation of new export control laws, beginning in the late 1990s, set a legal basis for strengthening China's export controls. Prior to these regulations, China's export control system was nebulous, and the true source of authority was difficult to assess.¹² The PLA and the defense industry held very powerful positions over export policy for sensitive items. Over the last few years, that predominance has weakened, and strictly civilian agencies, particularly the Ministry of Commerce, have become the key actors in export decisions, especially for dual-use items.

STATE COUNCIL AND CENTRAL MILITARY COMMISSION

The State Council, China's cabinet, sets the overarching policy for the export control system. For larger military items or items that may affect national security, the Central Military Commission (CMC), along with the State Council, plays a leading role in the application process. The State Council and the CMC are also involved with the review process for the export of MTCR category 1 items, but these transactions are very rare. (China last transferred a category 1 system in the early 1990s.)¹³ In general, the State Council does not play a role in routine applications, but will intercede when there is a disagreement among agencies. Many analysts monitoring China's export control system have pointed out the prominence of State Council and Politburo member Wu Yi, who is rumored to have the portfolio of export controls and has played an important role in promoting the issue at the highest level of China's government and party apparatus.¹⁴

MINISTRY OF COMMERCE

The Ministry of Commerce (MOFCOM) has the primary responsibility for implementing China's dual-use export controls. Since the mid-1990s, China's trade in large weapons systems, such as missiles, has ceased, but dual-use trade has increased, especially in the chemical and aerospace industries. Since that period, the U.S. government has been concerned about the impact of this trade on the development of WMD programs in the Middle East and South Asia. U.S. sanctions on Chinese entities during the last few years have been aimed solely at the transfer of dual-use items. MOFCOM's role, from a nonproliferation perspective, is therefore vital. According to China's Foreign Trade Law, MOFCOM is tasked with issuing export permits for all exporting firms. MOFCOM's Department of Science and Technology (DST) grants export licenses on a case-by-case basis. On most dual-use items, DST receives the export application from the exporting

entity. DST decides whether to grant an application, often after consultations with other relevant agencies and experts.

The Ministry of Commerce is increasingly involved with industry outreach and training. The MOFCOM website publishes China's export control regulations and control lists. In January 2004, MOFCOM's website posted the complete "Export Permit Management Catalog for Sensitive Materials and Technologies," which has specific details about items controlled by Chinese regulations. The Ministry has increased its focus on educating industrialists and export control officials. The Ministry, particularly DST, is cooperating with foreign export control authorities, including the U.S. Department of Commerce, to improve China's capacity to implement a viable export control system.

COMMISSION OF SCIENCE, TECHNOLOGY AND INDUSTRY FOR NATIONAL DEFENSE

The Commission of Science, Technology and Industry for National Defense (COSTIND) is a commission whose head is nominated by the Premier and approved by the National People's Congress. COSTIND was reformed and placed under civilian control following reforms announced in March 1998, but ties to the defense industry are still evident. While still a player in missile and nuclear related exports, much of COSTIND's earlier licensing duties have been shifted to MOFCOM. According to the 2003 White Paper on Nonproliferation:

China's nuclear export comes under the control of [COSTIND], jointly with other relevant government departments. Arms export, including the export of missiles, and facilities and key equipment used directly for the production of missiles, is under the control of COSTIND and the relevant department under the Ministry of National Defense, jointly with other government departments concerned.

Decision-making regarding nuclear exports falls under the China Atomic Energy Agency (CAEA), which is bureaucratically under COSTIND. According to information provided by MOFCOM and CAEA, items on China's nuclear export control list go first to CAEA for approval and then to MOFCOM for processing. These include all Nuclear Suppliers Group controlled items.

NATIONAL DEVELOPMENT AND REFORM COMMISSION AND THE CHEMICAL WEAPONS CONVENTION IMPLEMENTATION OFFICE

China has a large and dispersed chemical industry, with many small-scale facilities spread throughout the country, which makes regulating chemical exports one of the biggest challenges for the export control system. The licensing responsibilities for chemical exports are split between the MOFCOM and the Chemical Weapons Convention Implementation Office (CWCIO) under the National Development and Reform Commission (NDRC). The CWCIO is responsible for controlling all CWC scheduled chemicals, as well as ten items from the Australia Group list. The Ministry of Commerce controls all other dual-use chemicals, including the remaining AG-controlled

items. The CWCIO is made up of chemical experts, and is often asked to advise MOFCOM regarding the transfer of dual-use items.

MINISTRY OF FOREIGN AFFAIRS

China's Ministry of Foreign Affairs (MFA) has played an increasingly important role in the export control process in the last few years. As China's nonproliferation policy has evolved, the influence of arms control officials within the Ministry has increased. The MFA now has a stronger veto power for transfers that would damage China's image internationally, affect China's relations with other nations (particularly the United States), or go against nonproliferation commitments. Within the Ministry, the Department of Arms Control and Disarmament (DACD) coordinates China's nonproliferation activities and advises export control officials. The MFA has been particularly concerned about avoiding U.S. sanctions, and has reportedly stopped transfers from occurring where no Chinese law would have been broken but where U.S. sanctions may have occurred. Officials from DACD have consequently complained both privately and publicly that U.S. sanctions have made their jobs more difficult, especially when the U.S. government does not, in their opinion, provide adequate information for domestic investigations.¹⁵

GENERAL ADMINISTRATION OF CUSTOMS

The General Administration of Customs (GAC) is the executing body for China's export control system. GAC has until recently seen collection of trade duties and tariffs as being its primary purpose. Nonproliferation and export controls are only now becoming a focus of China's custom officials, but they have a limited ability to investigate illegal transfers. As of December 2004, inter-governmental discussions were apparently underway regarding the creation of a police force that would be officially under the Public Security Bureau, but only for enforcing custom laws and investigating violations.¹⁶ The lack of capacity in China's custom agencies and the lack of control from the center have hampered Beijing's ability to stop questionable transfers.¹⁷ In January 2004, Customs and the Ministry of Commerce established an online administration system for sensitive items and technologies that allows the two agencies to exchange information quickly, thus increasing the likelihood of stopping suspect shipments.¹⁸

CHANGING ROLE OF THE MILITARY AND DEFENSE INDUSTRY

China's military and its defense industry have historically held considerable power. Companies with strong military connections had little problem exporting items, no matter the nonproliferation implications. These companies make up the vast majority of entities that have been sanctioned by the U.S. government in the last ten years. The influence of the People's Liberation Army (PLA) and the defense industry continues to slow the process of reform within the Chinese export control system. While political elites appear to be taking the issue of export controls more seriously, the PLA continues to have sufficient political clout to hamper progress.

Despite challenges, the control and oversight of China's export control system has been shifting from the military to civilians. This evolution has contributed to the strengthening of Beijing's domestic regulations and positive changes in policy making. While the military's influence is still considerable, civilian agencies such as MOFCOM and MFA are playing the lead role in setting national export control policy. China's defense industry is now only a small part of the economy, one that is heavily based on international trade. More domestic actors want to avoid conflict with major trading partners, and China's leadership values its overall trade relations more than the small number of exports that bring U.S. sanctions.

Despite improvements in China's domestic export control regulations and increased participation in global nonproliferation regimes, the U.S. government continues to sanction Chinese entities for proliferation activities. During the eight years of the Clinton administration, Chinese entities were subject to sanctions 17 times. In just over four years since the Bush administration came into office, Chinese entities have been sanctioned a total of 50 times. In 2004 alone, 14 Chinese entities were sanctioned a total of 23 times. While certainly demonstrating the Bush administration's escalating reliance on sanctions to bring about further change in China's nonproliferation behavior, these rapidly increasing numbers are due in large part to changes in U.S. law, particularly the enactment of the Iran Nonproliferation Act of 2000. The Act authorizes the president to sanction entities making a material contribution to the development of WMD or missile systems in Iran.¹⁹ Thirty-eight of the 50 sanctions levied against Chinese entities by the Bush administration have been for violations of the Iran Nonproliferation Act.

China's arms manufacturers are state-owned enterprises whose top management is appointed by the State Council. The directors of the major arms firms have the equivalent rank of minister or vice minister and often have close personal ties to the PLA. Over the last decade or two, the Chinese government has introduced microeconomic reforms to increase efficiency for its arms producers, most notably by reducing or eliminating state subsidies. However, hard budget constraints create an incentive to seek export markets in order to decrease costs in an industry characterized by large economies of scale. This generates a conflict of interest for the Chinese government and its defense industry—economic reforms and export control commitments create very different incentives for Chinese institutions that ultimately control the behavior of defense industry enterprises. The resolution of this conflict is opaque and has to be investigated on a case-by-case basis.

Five companies—China Great Wall Industry Corporation, China Precision Machinery Import/Export Corporation, China North Industries Corporation (NORINCO), Wha Cheong Tai Company, Ltd., and Zibo Chemical Equipment Plant—and one Chinese national, Q.C. Chen, have all been sanctioned at least four times by the United States and are often referred to as “serial proliferators” by U.S. officials.²⁰ For some entities, such as the China Great Wall Industry Corporation and China Precision Machinery Import/Export Corporation, the sanctions have been spread out over more than a decade. But for NORINCO and Zibo Chemical Equipment Plant, the sanctions have all occurred since 2003 and 2002, respectively.

The China Great Wall Industry Corporation (CGWIC) is the sole commercial organization authorized by the Chinese government to provide commercial satellite launch services and space technology to international clients. Therefore, CGWIC is one of the main foreign trade arms of the China Aerospace Science and Technology Corporation (CASC), of which CGWIC is now, after reorganization in December 2004, a wholly owned subsidiary.²¹

In 1993, China Great Wall Industry Corporation established the Great Wall Aerospace Group with 32 other entities, such as China Precision Machinery Import/Export Corporation. The Group is organized with CGWIC at its center and 100 other member enterprises situated in 20 provinces within China and in Europe, North America, and Southeast Asia. It is also a member of the New Era (Xinshidai) Group, which was sanctioned by the U.S. in September 2004 for missile technology proliferation.²²

CGWIC imports and exports missile technology, space technology and equipment, space launch services, precision machinery, electronics, instruments, and meters. Since the introduction of its Long March launch vehicles in 1985, CGWIC has launched 27 foreign satellites and completed five piggyback payload missions.²³ Recently, CGWIC reached an agreement with the government of Nigeria to build and launch a communication satellite for the West African country in 2006.²⁴

In total, CGWIC has been sanctioned four times by the United States, including twice in 2004 for violating the Iran Nonproliferation Act. Most recently, on December 27, 2004, CGWIC was sanctioned for alleged transfers to Iran between 1999 and mid-2004, and though the items in question were not made public, it was reported that they involved high-performance metals and components that could aid the ability of Iran to extend the range of its missile systems.²⁵

Like CGWIC, China Precision Machinery Import/Export Corporation (CPMIEC) operates under the China Aerospace Science and Technology Corporation (CASC), and is also a member of the New Era (Xinshidai) Group, which manages its import and export activities.²⁶ Those activities include the import and export of high technology equipment, defensive weapon systems, space equipment, satellite technologies and products, precision machinery, optical instruments, and electronic products. CPMIEC is involved in missile and missile technology production, imports and exports, and is the prime contractor and marketer for China's M-series of missiles, which includes the M-9/DF-15 and the M-11/DF-11.

According to a classified March 2000 National Security Agency (NSA) report, CPMIEC had been selling missile technology to Libya since March 1999. In 1991 and 1993, CPMIEC was sanctioned for its involvement in missile-related transfers to Pakistan.²⁷ In November 2004, CPMIEC unveiled its new generation, radar-guided C-701 anti-ship missile (ASM) for export. The missile closely corresponds to the Iranian Kosar ASM, though the company has publicly denied any link.²⁸

Though CPMIEC and NORINCO have each been sanctioned six times, the most among Chinese entities, NORINCO has accomplished this feat in just over a year and a half, dating from when it was first sanctioned in May 2003. NORINCO was founded in 1980 as the successor organization to China's Fifth Ministry of Machine Building, which administered the production of armored vehicles, munitions, small arms, and artillery. In 1988, NORINCO was reorganized and the China Ordnance Industry Corporation (COIC) was established during a defense industrial system restructuring that sought to "corporatize" China's five defense industries in an effort to make them more efficient.²⁹ After the ninth meeting of the National People's Congress in 1998, COIC (along with the majority of China's defense industry) was further reorganized in 1998 and 1999, and divided into two entities—the China Ordnance Industry Group Company and the China Ordnance Equipment Industry Group Company. However, NORINCO has remained as one of the main export arms of the two new companies.³⁰

The NORINCO Group is one of China's ten defense industrial enterprises that report to the State Council, and though it does not have any formal ties to the People's Liberation Army, it is an important military supplier. NORINCO develops, produces and markets various military equipment, systems, and components, including fire control systems, sighting and aiming systems, and NBC protection equipment. The NORINCO Group posted a \$7.5 billion dollar profit in 2004, an increase of 25 percent over 2003, with reported current assets of \$12 billion.³¹

The U.S. government first imposed sanctions against NORINCO in May 2003 under Executive Orders 12938 and 13094, which allowed for the use of lower standards for triggering sanctions, provided for stricter penalties, and granted the Bush administration more flexibility in determining the length of the sanctions. NORINCO reportedly was involved in a series of dual-use material transfers (possibly including maraging steel) that could aid Iran's ballistic missile program.³² The sanctions were expected to have a significant impact on NORINCO because, at the time, the firm was doing \$100 million a year in trade with the United States. Nevertheless, NORINCO's profits increased considerably in 2004 despite the U.S. embargo on its goods.

NORINCO was also sanctioned three times in 2004, all for violations of the Iran Nonproliferation Act of 2000. Most recently, in December 2004, NORINCO was sanctioned for transferring high-performance metals and components that could aid Iranian efforts to increase the range of its ballistic missiles.

The China Great Wall Industry Corporation, China Precision Machinery Import/Export Corporation, and NORINCO are all subordinate to a larger conglomerate, the New Era Group, or Xinshidai. The Beijing-based New Era Group is one of China's two primary organizations involved in the arms trade, and is jointly administered by the General Staff Department of the PLA and the Commission of Science, Technology, and Industry for National Defense (COSTIND). This type of relationship exemplifies the possibility of conflicting interests whereby the incentive for foreign arms sales could override export control commitments.

The New Era Group, also known as the China New Era Group, conducts trade for COSTIND, acts as an intermediate level supervisory body for missile sales, and has jurisdiction over a number of major Chinese defense industry trading companies, in addition to planning and coordinating the import-export activities of its members.³³ The New Era Group was sanctioned along with all of its (unnamed) subsidiaries for missile technology proliferation in September 2004, a charge which the firm called “outrageous and unjustified.”³⁴

Three other Chinese entities have been subject to numerous U.S. sanctions, though there is very little open source information about any of them. Wha Cheong Tai Company, Ltd. has been sanctioned four times since May 2002, three times for violating the Iran Nonproliferation Act of 2000. Zibo Chemical Equipment Plant has been sanctioned five times since May 2002, each time under the Iran Nonproliferation Act of 2000.

The final entity is a private Chinese citizen, Chen Qingchang or Q.C. Chen, who has been sanctioned five times since 1997, three times for violations of the Iran Nonproliferation Act of 2000. However, there is very little public information about this individual.

CHINA’S ROLE IN PURSUADING NORTH KOREA TO ABANDON ITS NUCLEAR AMBITIONS

China’s strict observance of its export control commitments is a critical part of international efforts to deny North Korea access to WMD-related materials or components. Chinese enterprises could supply North Korea with materials that would enhance Pyongyang’s WMD and missile development programs, but Beijing’s cooperation should be expected given China’s national interests. For example, in the summer of 2003, China reportedly blocked a rail shipment of tributyl phosphate, a solvent that can be used in the extraction of weapons grade plutonium from spent fuel rods, after receiving a tip from U.S. intelligence.³⁵ This case shows the benefits of information sharing and that China is not completely opposed to the types of actions foreseen under the Proliferation Security Initiative (PSI). However, Beijing is very sensitive to the PSI and is concerned about the implications for international law and multilateral arms control and nonproliferation regimes.

China is also playing an active diplomatic role to defuse the North Korean nuclear issue. Beijing was instrumental in initiating the trilateral meeting between China, North Korea, and the United States in April 2003, and later the Six-Party Talks that also include Japan, South Korea, and Russia. To a significant extent, Beijing’s more proactive mediation in the North Korean nuclear crisis also reflects its recognition of the serious threat that WMD proliferation could pose to its security interests. The potential East Asian nuclear chain reactions as a result of Pyongyang’s nuclear weapons program and the Khan network of international nuclear smuggling drive home the importance of strengthened international coordination in meeting the proliferation challenge.³⁶

The North Korean nuclear problem is complex and U.S. policymakers appear divided in how this issue should be approached. It is impossible to know the intentions of other

human beings with 100 percent certainty, and the opacity of the North Korean government and policymaking process makes it difficult to assess whether Pyongyang would abandon its nuclear weapons program and under what conditions. However, I believe two conditions are necessary for North Korea to abandon its nuclear ambitions, and that we must continue our efforts to secure a non-nuclear Korean peninsula.

First, extreme pressure must be applied to North Korea, and Pyongyang must understand that diplomatic, political and economic pressure will only increase if it continues its nuclear programs. China's active participation in such an effort is necessary to achieve any success. However, pressure alone is not sufficient to persuade North Korea to abandon its nuclear weapons program. Furthermore, China is very unlikely to take any punitive measures that would destabilize the North Korean government unless Pyongyang were to take extremely provocative actions, but Pyongyang is unlikely to cross Beijing's red line, which is probably large-scale military operations against South Korea or the export of nuclear weapons to terrorist groups. In general, U.S. policymakers overestimate China's influence over North Korea, as well as the likelihood that Beijing will employ coercive measures against Pyongyang.

Second, North Korea will only abandon its nuclear weapons programs if it feels secure enough to do so. As a weak nation facing acute security problems, Pyongyang's motivations for acquiring nuclear weapons should be no surprise. South Korea had an active nuclear weapons program in the 1970s and Seoul only abandoned its nuclear ambitions under extreme U.S. pressure combined with credible U.S. security assurances. In many ways, North Korea faces a similar situation today, but China cannot provide the type of credible security assurances to persuade North Korea to give up its "nuclear deterrent." Without credible security assurances, pressure will only drive Pyongyang to continue or accelerate its nuclear program, as the last two and a half years have shown us. Paradoxically, in Pyongyang's view, the U.S. is the only nation that can provide the type of security assurances that might persuade North Korea to commit to the "complete, verifiable, and irreversible dismantlement" of its nuclear weapons program.

¹ This statement was prepared by the East Asia Nonproliferation Program at the Center for Nonproliferation Studies.

² Wendy Frieman, *China, Arms Control, and Nonproliferation* (London and New York: Routledge, 2004); Evan S. Medeiros "Integrating a Rising Power into Global Non-Proliferation Regimes: US-China Negotiations and Interactions on Non-Proliferation, 1980-2001," Unpublished dissertation. Department of International Relations, London School of Economics and Political Science, 2000; Jing-dong Yuan, "China's Pragmatic Approach to Nonproliferation Policy in the Post-Cold War Era," In Suisheng Zhao, ed., *Chinese Foreign Policy: Pragmatism and Strategic Behavior* (Armonk, NY: M.E. Sharpe, Inc., 2003), pp.151-176.

³ Bates Gill and Evan S. Medeiros, "Foreign and Domestic Influences on China's Arms control and Nonproliferation Policies," *The China Quarterly* 161 (March 2000), pp. 66-94.

⁴ Paul Kerr and Wade Boese, "China Seeks to Join Nuclear, Missile Control Groups," *Arms Control Today* Vol. 34, No. 2, March 2004, pp. 37, 39.

⁵ "Joint United States-People's Republic of China Statement on Missile Proliferation," October 4, 1994.

⁶ Associated Press, "China Pledges It Will Not Aid Foreign Missile Development," November 21, 2000.

⁷ *ibid.*

⁸ Richard T. Cupitt, "Nonproliferation Export Controls in the People's Republic of China," in Michael D. Beck, Richard T. Cupitt, Seema Gahlaut, and Scott A. Jones, *To Supply or To Deny: Comparing Nonproliferation Export Controls in Five Key Countries* (The Hague: Kluwer Law International, 2003),

pp.117-142; Jennifer C. Bulkeley, "Making the System Work: Challenges for China's Export Control System," *The Nonproliferation Review*, Vol. 11, No. 1, Spring 2004, pp.145-169; Jing-dong Yuan, Phillip C. Saunders, and Stephanie Lieggi, "New Developments in China's Export Controls: New Regulations and New Challenges," *The Nonproliferation Review*, Vol. 9, No. 3, Fall-Winter 2002, pp.153-167.

⁹ Gill and Evans, "Foreign and Domestic Influences"; Stephanie Lieggi's private correspondence with Chinese arms control officials, 2004.

¹⁰ The China Arms Control and Disarmament Association (CACDA), established in 2001, has become a lead organization (although with strong government endorsement and partial funding) that coordinates China's emerging NGO arms control research programs.

¹¹ Kathleen Walsh, "China White Paper Reflects Evolving PRC Views on Nonproliferation: Bodes Well for Future Progress," *NIS Export Control Observer*, February 2004, p. 17,

<http://cns.miis.edu/pubs/nisexcon/pdfs/ob_0402e.pdf>.

¹² For an extensive analysis of China's arms exports prior to 2000, see Bates Gill and Evan Medeiros, *Chinese Arms Exports: Policy, Players and Process*, Monograph, Strategic Studies Institute, August 2000.

¹³ Stephanie C. Lieggi, "Overview of China's Export Control System," *Asian Export Control Observer*, June 2004, pg. 16, <http://cns.miis.edu/pubs/observer/asian/pdfs/aeco_0406.pdf>.

¹⁴ Jennifer C. Bulkeley, "Making the System Work: Challenges for China's Export Control System," *The Nonproliferation Review*, Vol. 11, No. 1, Spring 2004, p. 162.

¹⁵ Lora Saalman, Rapporteur, "Report of the Fifth U.S.-China Conference on Arms Control, Disarmament and Nonproliferation," <<http://cns.miis.edu/cns/projects/eanp/research/uschina5/5thconf.pdf>>.

¹⁶ Discussion between Stephanie Lieggi and Chinese export control official, December 2004.

¹⁷ Lieggi, p. 16.

¹⁸ Saalman, p. 28.

¹⁹ "U.S. Missile Sanctions," Arms Control Association Fact Sheet, March 2002,

<<http://www.armscontrol.org/factsheets/missanc.asp>>.

²⁰ John Bolton, "Coordinating Allied Approaches to China," Remarks at co-sponsored event by Tokyo American Center and the Japan Institute for International Affairs, Tokyo, Japan, February 7, 2005,

<<http://www.state.gov/t/us/rm/41938.htm>>.

²¹ Official company website of the China Great Wall Industry Corporation, "About CGWIC,"

<<http://www.cgwic.com/about/index.html>>.

²² "China Great Wall Industry Corporation," *China Profiles*, <<http://www.nti.org/db/china/cgwic.htm>>.

²³ Official company website of China Great Wall Industry Corporation, "About CGWIC,"

<<http://www.cgwic.com/about/index.html>>.

²⁴ "Nigeria to Launch Communication Satellite in 2006: Minister," Agence France Press, February 9, 2005, Lexis-Nexis.

²⁵ "US Arms Control/Nonproliferation Sanctions against China and/or Chinese Entities,"

<<http://www.nti.org/db/china/sanclist.htm>>.

²⁶ "China Precision Machinery Import/Export Corporation," *China Profiles*,

<<http://www.nti.org/db/china/cpmiec.htm>>.

²⁷ Shirley Kan, "China's Proliferation of Weapons of Mass Destruction and Missiles: Current Policy Issues," CRS Issue Brief for Congress, July 2002,

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²⁸ Douglas Barrie, "Guided Development; Beijing Reveals Domestic, Export-oriented Programs in Air- and Surface-launched Guided Weapons Arena," *Aviation Week and Space Technology*, November 8, 2004, in Lexis-Nexis.

²⁹ R. Bates Gill and Evan S. Medeiros, "Chinese Arms Exports: Policy, Players and Process," Strategic Studies Institute, August 2000.

³⁰ "China North Industries Group (NORINCO)," *China Profiles*,

<<http://www.nti.org/db/china/norinco.htm>>.

³¹ "China North Industries NNNN Revenue up 26.44 Pct," Xinhua Financial Network News, January 10, 2005, in Lexis-Nexis.

³² Phillip Saunders and Stephanie Lieggi, "What's Behind U.S. Nonproliferation Sanctions against Norinco," CNS Research Story, May 30, 2003, <<http://cns.miis.edu/pubs/week/030530.htm>>.

³³ "New Era (Xinshidai) Corporation," *China Profiles*, <<http://www.nti.org/db/china/newera.htm>>.

³⁴ “Chinese Firm Xinshidai Condemns ‘Outrageous’ US Sanctions,” AFX News Limited, October 1, 2004, in Lexis-Nexis.

³⁵ *Asahi Shimbun*, February 21, 2004, in “Japan Daily Reports China Intercepted Nuclear-Related Chemical Bound for DPRK,” FBIS Document ID: JPP20040225000051.

³⁶ Bates Gill, “China’s New Security Multilateralism and Its Implications for the Asia-Pacific Region,” *SIPRI Yearbook 2004: Armaments, Disarmament and International Security* (Oxford: Oxford University Press for SIPRI, 2004), pp. 216-218.

Appendix

Table 1. China and International/Multilateral Nonproliferation Treaties/Regimes

International Treaties and Negotiations	Multilateral Export Control Regimes
<ul style="list-style-type: none"> • Acceded to the Non-Proliferation Treaty (NPT), March 1992 • Supported the indefinite extension of the NPT, May 1995 • Signed the Comprehensive Test Ban Treaty (CTBT), September 1996 • Signed and ratified the IAEA Additional Protocol in 2002 (the only nuclear weapons state to do so) • Signed on to the Latin American Nuclear Weapons-Free Zone (1973); South Pacific Nuclear Weapons-Free Zone (1987); Africa Nuclear Weapons-Free Zone (1996); Southeast Asian Nuclear Weapons-Free Zone (1999) 	<ul style="list-style-type: none"> • Joined the International Atomic Energy Agency (IAEA) in 1984 • Joined the Zangger Committee in October 1997 • Applied for membership in the Nuclear Suppliers Group (NSG) in January 2004 and was accepted into the NSG in May 2004
<ul style="list-style-type: none"> • Signed the Geneva Protocols in 1952 • Signed the Biological Weapons Convention in 1984 • Signed the Chemical Weapons Convention (CWC), January 1993; • Ratified the CWC and joined the Organization for the Prohibition of Chemical Weapons (OPCW) as a founding member, April 1997 	<ul style="list-style-type: none"> • Issued domestic regulations on exports of chemical, biological and dual-use items with control list similar to that maintained by the Australia Group (1995-2002) • Consultation with the Australia Group
<ul style="list-style-type: none"> • Participated in but later withdrew from the P-5 talks on Middle East Arms control, 1991-92 • Participated in the United Nations Register of Conventional Arms from 1993 to 1997 • Signed the Inhumane Weapons Convention in 1981 	<ul style="list-style-type: none"> • Consultation with the Wassenaar Arrangement
<ul style="list-style-type: none"> • Signed the Outer Space Treaty in 1983 • Participated in the negotiation of but did not sign on to the Hague Code of Conduct against the Proliferation of Ballistic Missiles 	<ul style="list-style-type: none"> • Pledged to abide by the original 1987 Missile Technology Control Regime (MTCR) guidelines in February 1992 • Agreed in the October 1994 US-China joint statement to adhere to the MTCR and agreed to apply the concept of “inherent capability” to its missile exports • U.S.-China official talks during 1997-1998 on China’s possible membership in the MTCR • Consultation with the MTCR on membership; bid not successful at the October 2004 plenary meeting

Sources: Adapted from Center for Nonproliferation Studies, Inventory of International Nonproliferation Organizations & Regimes (Monterey, CA: Center for Nonproliferation Studies, updated 2004) <<http://cns.miis.edu/pubs/inven/index.htm>>; database compiled by the East Asia Nonproliferation Program, Center for Nonproliferation Studies <<http://nti.org.db.china>>.

Table 2. Evolution of China's Export Control System since the 1990s

SECTORS	LAWS AND REGULATIONS
General	<ul style="list-style-type: none"> • Foreign Trade Law, 1994
Chemical, Biological & Dual-Use	<ul style="list-style-type: none"> • Regulations on Chemical Export Controls, December 1995 • Supplement to the December 1995 regulations, March 1997 • A ministerial circular (executive decree) on strengthening chemical export controls, August 1997 • Decree No.1 of the State Petroleum and Chemical Industry Administration (regarding chemical export controls), June 1998 [Note: These regulations have expanded the coverage of China's chemical export controls to include dual-use chemicals covered by the Australia Group] • Measures on Export Control of Certain Chemicals and Related Equipment and Technologies and Certain Chemicals and Related Equipment and Technologies Export Control List, October 2002 • Regulations of the People's Republic of China on Export Control of Dual-Use Biological Agents and Related Equipment and Technologies and Dual-Use Biological Agents and Related Equipment and Technologies Export Control List, October 2002
Nuclear & Dual-Use	<ul style="list-style-type: none"> • Circular on Strict Implementation of China's Nuclear Export Policy, May 1997 • Regulations on Nuclear Export Control, September 1997 (Note: The control list included in the 1997 regulations is identical to that used by the Nuclear Suppliers Group, to which China is not a member) • Regulations on Export Control of Dual-Use Nuclear Goods and Related Technologies, June 1998 • Amended Nuclear Export Control List, June 2001
Military & Dual-Use	<ul style="list-style-type: none"> • Regulations on Control of Military Products Export, October 1997 • The Procedures for the Management of Restricted Technology Export, November 1998 (Note: The new regulations cover 183 dual-use technologies, including some on the Wassenaar Arrangement's "core list" of dual-use technologies) • China's Ministry of Foreign Trade and Economics Cooperation (MOFTEC) released a Catalogue of Technologies which are Restricted or Banned in China, presumably also in late 1998 • Decision of the State Council and the Central Military Commission on amending the PRC Regulations on Control of Military Product Exports, October 2002
Ballistic Missiles	<ul style="list-style-type: none"> • Regulations of the People's Republic of China on Export Control of Missiles and Missile-related Items and Technologies and the Missiles and Missile-related Items and Technologies Export Control List, August 2002

Sources: Adapted from database compiled by the East Asia Nonproliferation Program, Center for Nonproliferation Studies <<http://www.nti.org/db/china>>.

Table 3. Sanctions on China Great Wall Industry Corporation

Company	Date	Description	Status
China Great Wall Industry Corporation	Dec. 27, 2004	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000; for the alleged transfer of high-performance metals and components that could aid Iran's efforts to extend the range of its missiles.	Duration of at least two years
China Great Wall Industry Corporation	Sept. 23, 2004	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000 for the transfer to Iran of equipment and technology controlled by international export control lists or with the potential to aid in the development and production of missiles and weapons of mass destruction.	Duration of at least two years
China Great Wall Industry Corporation	August 24, 1993	Imposed pursuant to the 1990 Missile Technology Control Act; Sanctioned as a subsidiary of the Chinese Ministry of Aerospace Industry for engaging in missile technology proliferation activities with Pakistan's Ministry of Defense	Waived November 1, 1994; Subsequent to US-China Joint Statement on Missile Proliferation, US State Department waived sanctions against MIA and all of its entities in the interest of U.S. national security
China Great Wall Industry Corporation	June 25, 1991	Imposed pursuant to the 1990 Missile Technology Control Act for involvement with the export of M-11 missiles to Pakistan	Waived March 23, 1992 for national security reasons

Source: East Asia Nonproliferation Program, Center for Nonproliferation Studies, Feb. 2005.

Table 4. Sanctions on China Precision Machinery Import/Export Corporation

Company	Date	Description	Status
China Precision Machinery Import/Export Corporation	April 4, 2004	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000	Duration of at least two years
China Precision Machinery Import/Export Corporation	July 24, 2003	Imposed pursuant to provisions of Executive Order 12938 for the transfer of missile technology to an undisclosed recipient	Duration not specified; Until otherwise waived by the Secretary of State
China Precision Machinery Import/Export Corporation	July 3, 2003	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000	Duration of two years or until otherwise waived by the Secretary of State
China Precision Machinery Import/Export Corporation	May 9, 2002	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000	Duration of at least two years
China Precision Machinery Import/Export Corporation	August 24, 1993	Imposed pursuant to the 1990 Missile Technology Control Act; Sanctioned as a subsidiary of the Chinese Ministry of Aerospace Industry for engaging in missile technology proliferation activities with Pakistan's Ministry of Defense	Waived November 1, 1994; Subsequent to US-China Joint Statement on Missile Proliferation, US State Department waived sanctions against MIA and all of its entities in the interest of U.S. national security
China Precision Machinery Import/Export Corporation	June 25, 1991	Imposed pursuant to the 1990 Missile Technology Control Act for involvement with the export of M-11 missiles to Pakistan	Waived March 23, 1992 for national security reasons

Source: East Asia Nonproliferation Program, Center for Nonproliferation Studies, Feb. 2005.

Table 5. Sanctions on China North Industries Corporation (NORINCO)

Company	Date	Description	Status
China North Industries Corporation (NORINCO)	December 27, 2004	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000; for the alleged transfer of high-performance metals and components that could aid Iran's efforts to extend the range of its missiles.	Duration of at least two years
China North Industries Corporation (NORINCO)	September 23, 2004	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000 for the transfer to Iran of equipment and technology controlled by international export control lists or with the potential to aid in the development and production of missiles and weapons of mass destruction.	Duration of at least two years
China North Industries Corporation (NORINCO)	April 1, 2004	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000	Duration of at least two years
China North Industries Corporation (NORINCO)	September 19, 2003	Imposed pursuant to Section 73(a) (2) (A) and (C) of the Arms Export Control Act, and Section 11B (b) (1) (B) (i) and (iii) of the Export Administration Act of 1979; For alleged "missile technology proliferation activities"; Ban on imports, new export licenses.	Duration of two years; Ban on missile technology-related imports waived for one year to due reasons "essential to the national security of the United States"
China North Industries Corporation (NORINCO)	July 3, 2003	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000	Duration of two years or until otherwise waived by the Secretary of State
China North Industries Corporation (NORINCO)	May 23, 2003	Imposed pursuant to provisions of Executive Order 12938; Includes ban on U.S. government procurement and any imports of NORINCO goods into the United States	Duration of two years or until otherwise waived by the Secretary of State

Source: East Asia Nonproliferation Program, Center for Nonproliferation Studies, Feb. 2005

Table 6. Sanctions on Wha Cheong Tai Company, Ltd.

Company	Date	Description	Status
Wha Cheong Tai Company Ltd.; Wah Cheong Tai Company; Hua Chang Tai Company	December 27, 2004	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000; for the alleged transfer of high-performance metals and components that could aid Iran's efforts to extend the range of its missiles.	Duration of at least two years
Wha Cheong Tai Company Ltd.; Wah Cheong Tai Company; Hua Chang Tai Company	November 24, 2004	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000 for reportedly selling weapons or missile technology and equipment to Iran	Duration of at least two years
Wha Cheong Tai Company Ltd.; Wah Cheong Tai Company; Hua Chang Tai Company	July 9, 2002	Imposed pursuant to the Iran-Iraq Nonproliferation Act of 1992	Duration of at least two years
Wha Cheong Tai Company Ltd.; Wah Cheong Tai Company; Hua Chang Tai Company	May 9, 2002	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000	Duration of at least two years

Source: East Asia Nonproliferation Program, Center for Nonproliferation Studies, Feb. 2005

Table 7. Sanctions on Zibo Chemical Equipment Plant

Company	Date	Description	Status
Zibo Chemical Equipment Plant; Chemet Global Ltd of China; South Industries Science and Technology Trading Company, Ltd.	December 27, 2004	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000; for the alleged transfer of high-performance metals and components that could aid Iran's efforts to extend the range of its missiles.	Duration of at least two years
Zibo Chemical Equipment Plant; Chemet Global Ltd of China; South Industries Science and Technology Trading Company, Ltd.	Sept. 23, 2004	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000	Duration of at least two years
Zibo Chemical Equipment Plant; Chemet Global Ltd of China; South Industries Science and Technology Trading Company, Ltd.	April 1, 2004	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000	Duration of at least two years
Zibo Chemical Equipment Plant; Chemet Global Ltd of China; South Industries Science and Technology Trading Company, Ltd.	July 3, 2003	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000	Duration of two years or until otherwise waived by the Secretary of State
Zibo Chemical Equipment Plant; Chemet Global Ltd of China; South Industries Science and Technology Trading Company, Ltd.	May 9, 2002	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000	Duration of at least two years

Source: East Asia Nonproliferation Program, Center for Nonproliferation Studies, Feb. 2005

Table 8. Sanctions on Q.C. Chen

Company	Date	Description	Status
Q.C. Chen; Chen Qingchang	December 27, 2004	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000	Duration of at least two years
Q.C. Chen; Chen Qingchang	November 24, 2004	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000 for reportedly selling weapons or missile technology and equipment to Iran	Duration of at least two years
Q.C. Chen; Chen Qingchang	July 9, 2002	Imposed pursuant to the Iran-Iraq Nonproliferation Act of 1992	Duration of at least two years
Q.C. Chen; Chen Qingchang	May 9, 2002	Imposed pursuant to Section 3 of the Iran Nonproliferation Act of 2000	Duration of at least two years
Q.C. Chen; Chen Qingchang	May 21, 1997	Imposed pursuant to the Chemical and Biological Weapons Control and Warfare Elimination Act of 1991; for involvement in the export of dual-use chemical precursors and/or chemical production equipment and technology	Duration of at least one year

Source: East Asia Nonproliferation Program, Center for Nonproliferation Studies, Feb. 2005