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THE JOINT CHIEFS OF STAFF
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SECRETARY OF DEFENCE

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JCSM-211-83
15 July 1983

MEMORANDUM FOR THE SECRETARY OF DEPENSE

Subject: Assessment of the Risks and Benefits in the Transfer of Advanced Technology and Conventional Arms to China (U)

1. ~~(S)~~ On 9 June 1983, the President directed that an interagency group be formed under the Director of Political-Military Affairs, NSC, to establish the national security framework for technology transfer to the PRC. At the first meeting of this interagency group on 15 June, four tasks were assigned to the Joint Chiefs of Staff:

a. ~~(S)~~ Assess the impact of technology transfer and conventional arms sales on the Sino-Soviet and Sino-United States military balance.

b. ~~(S)~~ Develop an analytical framework for evaluating the net strategic impact of conventional arms and technology transfers across a broad range of technologies.

c. ~~(S)~~ Redefine credible threat to US interests, taking into account the above analysis.

d. ~~(S)~~ Establish a more rigorous subdefinition of the Special Mission Areas.

2. ~~(S)~~ The assessment in Enclosure A was drafted by the Joint Staff in conjunction with the Services and DIA and was coordinated with NSA and OSD. It analyzes the probable effect on Chinese military capabilities of the recent decision to liberalize policy on technology transfer to the PRC. Based on this analysis, it addresses the questions posed by the other NSC taskings.

3. (U) The Joint Chiefs of Staff recommend that:

a. ~~(S)~~ The JCS Assessment of the Benefits and Risks in the Transfer of Technology and Conventional Arms to the People's Republic of China in Enclosure A be adopted as the DOD position.

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b. ~~(S)~~ A memorandum, substantially like that in Enclosure B, be forwarded with Enclosure A to the Assistant to the President for National Security Affairs by 16 July 1983.

For the Joint Chiefs of Staff:

JOHN W. VESSEY, JR.
Chairman
Joint Chiefs of Staff

Attachments

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JCS ASSESSMENT OF THE BENEFITS AND RISKS IN THE TRANSFER OF ADVANCED TECHNLOGY AND CONVENTIONAL ARMS TO THE PEOPLE'S REPUBLIC OF CHINA

TABLE OF CONTENTS

JCS ASSESSMENT OF THE BENEFITS AND RISKS IN THE TRANSFER OF ADVANCED TECHNOLOGY AND CONVENTIONAL ARMS TO THE PEOPLE'S REPUBLIC OF CHINA (U)

EXECUTIVE SUMMARY AND CONCLUSIONS

1. ~~(S)~~ Purpose. The purpose of this study is to provide a JCS assessment, in response to tasking by the National Security Council, of the benefits and risks associated with the transfer of advanced dual-use technology and conventional arms to the People's Republic of China (PRC).

2. ~~(S)~~ Overview. US export policy toward the PRC is aimed at supporting China's national development insofar as it maintains China as a counterweight to Soviet power, while keeping risks to US and allied security at a manageable level. The transfer of advanced technology to the PRC involves some degree of increased risk to US and allied interests and security, but is balanced by the benefits of maintaining China's ability to counter the growing Soviet threat, continuing the PRC's strategic orientation toward the West and against the Soviet Union, and furthering the integration of China into the world economy.

3. ~~(S)~~ Problems. In order to develop a US Government policy that would allow substantial liberalization of technology transfer to the PRC, the National Security Council assigned

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four tasks to the Department of Defense and the Joint Chiefs of Staff:

a. ~~(S)~~ Assess the impact of technology transfer and conventional arms sales on the Sino-Soviet and Sino-US military balance.

b. ~~(S)~~ Develop an analytical framework for evaluating the net strategic impact of conventional arms and technology transfers across a broad range of technologies.

c. ~~(S)~~ Redefine credible threat to US interests, taking into account the above analysis.

d. ~~(S)~~ Establish a more rigorous subdefinition of the Special Mission Areas.

4. ~~(S)~~ Section I provides the assessment of the impact of technology transfer and conventional arms sales on China's military capabilities vis-a-vis the Soviet Union and the United States requested in the first task. The redefinition of "credible threat" and the subdefinition of the Special Mission Areas requested in the third and fourth tasks comprise Sections II and III, as they are needed to establish the basis of the requested analytical framework (second task). Section IV concludes this study by setting forth an analytical framework for evaluating the net strategic impact of conventional arms and technology transfers across a broad range of technologies.

5. (U) Conclusions

a. (U) Section I: Strategic Assessment

(1) ~~(S/NOFORN)~~ No Chinese military capability developments are foreseen over the next two decades that would appreciably alter the current military imbalance between China and the Soviet Union. In certain areas, current gaps in technology and capability may widen. Even with significantly increased access to US military technology, improvements that could ultimately result in substantially upgraded defenses against the USSR would not be fully realized before the mid-1990s.

(2) ~~(S/NOFORN)~~ China will only slightly improve its defensive capability against conventional land invasion over the next two decades regardless of the level of technology acquired. Improved mobility, communications, air defense, and some new weapons will improve China's capability to contest an invasion from more forward positions. However, the level of technology embodied in new Chinese weapons will remain appreciably inferior to that of the Soviet Union. In

addition, it will take some time, probably not until the mid-1990s, for China to thoroughly absorb and begin work toward meaningful production and deployment of systems based on most new technologies introduced in the 1980s and for it to develop appropriate strategic concepts, doctrine, and training for the effective employment of weapons based on those technologies.

(3) ~~(S)~~ Transfer of Western dual-use technology and conventional weapons systems will eventually raise the level of Chinese military capabilities, but not significantly increase the threat these may pose to US forces. However, enhancements could impact substantially on US allies and interests--most notably, South Korea and Taiwan.

(4) ~~(S/NOFORN)~~ The most important effects of significant liberalization in technology transfer policy to China will not be manifest until the turn of the century. At the mid-1990s point and beyond, the synergistic effect of multiple technologies and weapons systems, acquired openly or covertly, coupled with faster than expected PRC technological progress,

could pose serious threats to the United States, its allies, and its interests in the 21st century.

b. ~~(U)~~ Section II: Credible Threat. To provide clear distinctions between two often confused concepts, the terms "threat" and "risk" have been defined. In May 1983, the Joint Chiefs of Staff defined "major national security risks in the transfer of technology as those that would permit enhancement of PRC military capabilities to a threatening level." This definition is valid and should be included as a consideration during the case review process. Other terms, such as "credible threat," "credible risk," and "major risk" should be avoided.

c. ~~(C)~~ Section III: Reassessment of the Special Mission Areas

1. ~~(C)~~ The Special Mission Areas as originally defined are inadequate to serve as a guideline for identifying those technologies whose transfer would threaten US interests. They are too broad, in that they have been interpreted to include basic technologies, and too narrow, in that they do not address other technologies that China could use to develop threatening capabilities.

(a) ~~(S)~~ It is proposed that the Special Mission Areas be replaced by "Critical Military Capabilities" and include two additional categories: "power projection" and "air superiority." The Critical Military Capabilities would then include:

- Nuclear Weapons and Delivery Systems
- Electronic Warfare
- ASW
- Intelligence Collection
- Power Projection
- Air Superiority

(b) ~~(S)~~ Those types of technologies whose transfer could be used by China to threaten US interests in Critical Military Capabilities are:

- Basic Production Technologies at Their Most Advanced Stages
- Military-Related State-of-the-Art Technologies and Weapon Systems
- Mature, Sensitive Technologies

(c) ~~(S)~~ A case-by-case review of all weapons systems and military-related technologies is required.

2. (S) Two other phrases in the 4 June 1981 Presidential directive whose use has led to confusion should be replaced:

(a) (S) Replace "minimize national security risk" with "maintaining national security risk at a manageable level."

(b) (S) Drop the "two times rule."

d. (S) Analytical Framework. A two-stage analytical framework has been developed for evaluating technology and weapon system transfers.

(1) (S) Determination of whether the license requests involves a technology in one of three Sensitive Technological Areas:

a. Basic Production Technology.

b. Military-Related Technologies and Weapon Systems.

c. Mature, Sensitive Technologies.

(2) (S) If a request falls in the third Sensitive Technological Area, rejection is recommended. License requests in the first two Sensitive Technological Areas are to be subjected to a Criteria Checklist that takes into account the overall and regional strategic

balances, the ability of the United States to maintain superiority in the Critical Military Capabilities (as determined by the DOD), and the general state of relations.

(3) ~~(S)~~ If the license request satisfies these conditions, approval is recommended.

INTRODUCTION (U)

1. ~~(S/NOFORN)~~ US export policy toward the PRC is aimed at supporting China's national development as a counter-weight to Soviet power, while keeping risks to US and allied security at a manageable level. This policy derives from a primary national interest: developing an effective relationship with China benefits the United States and complicates Soviet military planning. At the same time, there is concern that a too liberal export policy could be exploited by the PRC to develop capabilities that would threaten US and allied interests.

2. ~~(S/NOFORN)~~ This concern is tempered both by the demonstrated ability of the PRC to develop some weapon programs without assistance from the West, its ability to obtain some technologies covertly, and its difficulties in developing most advanced technology and modern weapons systems. In short, the transfer of advanced technology to the PRC involves some degree of increased risk to US and allied interests and security. This is balanced by benefits of increasing the PRC's ability to counter the Soviet threat and the continuing integration of China into the world economy.

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3. ~~(S)~~ In order to develop a US Government policy that would allow substantial liberalization of technology transfer to the PRC, the NSC assigned four tasks to the Department of Defense and the Joint Chiefs of Staff:

a. ~~(S)~~ Assess the impact of technology transfer and conventional arms sales on the Sino-Soviet and Sino-United States military balance.

b. ~~(S)~~ Develop an analytical framework for evaluating the net strategic impact of conventional arms and technology transfers across a broad range of technologies.

c. ~~(S)~~ Redefine credible threat to US interests taking into account the above analysis.

d. ~~(S)~~ More rigorous subdefinition of the Special Mission Areas.

4. ~~(S)~~ An assessment of the impact of technology transfer and conventional arms sales on China's military capabilities vis-a-vis the Soviet Union and the United States forms the basis for this report. The redefinition of "credible threat" and the subdefinition of the Special Mission Areas requested in the third and fourth tasks comprise Sections II and III, as they are needed to establish the basis of the

requested analytical framework (second task). Section IV concludes this study by setting forth the analytical framework for evaluating the net strategic impact of conventional arms and technology transfers across a broad range of technologies.

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SECTION I--STRATEGIC ASSESSMENT (U)

1. ~~(C)~~ Introduction. This section examines the impact on China's military capabilities of available Western technology and the effect of a substantially liberalized US export control policy on the Sino-Soviet and Sino-United States military balances. To make this assessment, certain judgments and assumptions regarding future Sino-American relations and other factors have necessarily been made. The section assesses the likely priority, objectives, and qualitative improvements to Chinese forces, with special reference to the Sino-Soviet military balance and impact on US interests. While US understanding of current Chinese military and industrial capabilities is sound, the assessment of future Chinese force development is necessarily judgmental.

a. This section examines the 10- and 20-year impact of US technology transfer policy on Chinese military capabilities by contrasting the results of two hypothetical cases of technology transfer policy to China:

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(1) ~~(S)~~ Projections of expected PRC military developments under a continuation of recent US policy regarding technology levels in terms of quantity and quality that China had access to in 1980-1982; i.e., if China were to remain in Category P and be afforded access to technology at approximately twice the level available to the Soviet Union prior to its invasion of Afghanistan.

(2) ~~(S)~~ Substantially liberalized Chinese access to that level and quantity of military related and dual-use technology available on the world market, excluding those technologies that the United States rigorously controls or shares only with its closest allies.

b. ~~(S/NOFORN)~~ It should be emphasized that technology not already in China's possession is unlikely to be widely deployed within the next ten years. Furthermore, the latter half of the 1990s seems to be the period most likely for initiation of military developments which will appear as hardware in the first half of the next century.

The quantity and sophistication of technology transferred now will be critical in shaping the capabilities China will have in its own right in excess of 20 years downstream.

2. (U) Definitions

a. (U) Technology. For the purposes of this study, technology is defined as arrays of know-how (including design and manufacturing know-how); inspection, or test equipment; materials; or goods that can be used in the design, production, maintenance or operation of military material or weapons.

b. ~~(C)~~ Risk vs Threat. An important distinction that will be made throughout this study is between the terms "risk" and "threat." Any move that increases the military capability of the PRC entails some risk to the United States These risks remain manageable if the ability of the United States to defend its interests is not called into question By contrast, a threat ensues when the PRC develops a capability to jeopardize either US interests or the ability of the US to defend its interests.

3. ~~(S/NOFORN)~~ Underlying Judgments. In assessing the impact of technology transfer to China under each of these cases, certain underlying estimative judgments have been made recently by the US intelligence community. These judgments provide the assumptions that form the parameters for China's possible future.

a. ~~(S/NOFORN)~~ While China will undergo major national leadership changes during the next 10 years, internal political stability, the present orientation toward modernization, and nonalignment with the Soviet Union will likely endure into the 1990s. China's domestic situation through the remainder of that decade cannot be estimated with the same degree of confidence.

b. (S/NOFORN) China's drive toward modernization is serious and broadbased, possessing a unified top leadership commitment to successful fulfillment of its articulated goals over the long term. In this context, military modernization programs will continue, some with particularly high priority. Primary emphasis will be on the development of a modern industrial base to eventually support a self-reliant defense industry. Most improvements in Chinese military capabilities will be based on

indigenous Chinese efforts utilizing acquired Western technology. In the military sector, the large scale purchases of end-items, turn-key manufacturing plants, and co-production agreements with extensive techhical/ advisory assistance are considered unlikely.

c. (S/NOFORN) In the coming decade, Chinese modernization programs and resource allocation priorities will remain essentially the same. Barring an immediate military threat to PRC security, defense modernization will continue to occupy a lower priority than agricultural, industrial, and scientific and technical modernization. By the early 1990s, China will still be in the early phases of its comprehensive modernization program.

d. (S/NOFORN) Overall Chinese capacity to assimilate advanced technology and to translate that technology into fielded systems will remain modest into the early 1990s. Exceptions to this may occur in a few selected high priority areas, such as strategic missile systems, where concentration of resources and effort is expected to yield significant advances.

e. ~~(S/NOFORN)~~ Advanced technology once transferred to China is now, and will continue to be, disseminated according to Chinese priorities without regard to declared end-users at the time of transfer.

f. (S/NOFORN) While there may be improvements in Sino-Soviet relations, the USSR will remain China's primary long-term threat. Therefore, the country most affected by transfer of US (and/or Western) high technology to Chinese weapons development programs will be the Soviet Union. However, technology transfer also has the potential for affecting US interests.

g. ~~(S/NOFORN)~~ The secondary threat to PRC security will continue to be Vietnam

4. ~~(S)~~ Current and Projected Military Capabilities. This portion of the study outlines China's present strategic and general purpose force capabilities as they relate to the United States, Soviet Union, and US allies and interests in Asia It assesses China's progress toward expanded military capabilities under present conditions of technology access and under conditions of substantially liberalized access.

a. (U) NUCLEAR FORCES

(1) ~~(S/NOFORN)~~ All of the USSR and the United States is within the range of China's small force of inter-continental range ballistic missiles. The larger

MRBM/IRBM force can target the Soviet Union east of the Urals and all of Asia. Low system accuracy in all weapons dictates countervalue targeting. China has no credible early warning capability, but hardness, concealment, deception, and MRBM/IRBM mobility provide some assurance of the survival of retaliatory capability even in the event of surprise attack. China cannot execute a quick reaction launch, destroy hardened targets, or effectively retarget its missiles. SSBNs/SLBMs will not be a real factor until at least the late 1980s.

(2) ~~(S/NOFORN)~~ Nuclear Force Developments Under Existing Transfer Policy. During the next 10 years, given existing access to technology, China's nuclear capabilities will continue to grow. Enhancement of nuclear force capability is a key national objective. Economic retrenchments since 1980 have had little effect on programs to improve these forces. China's research and development programs for strategic and tactical nuclear weapons will benefit from increased funds allocated to education and industrial and scientific modernization, but continued access to foreign technology will be required to significantly improve its nuclear weapons and delivery systems. It

should be emphazed that improvement of nuclear military systems has been given a much higher priority than other military modernization programs, so that it is not dependent on direct or diverted transfer of foreign technology. A combination of domestic R&D resources and covertly acquired foreign technology should be sufficient for China to continue the measured upgrade and modernization of its nuclear forces.

(3) ~~(S/NOFORN)~~ The most significant developments likely to occur over the next 10 years in Chinese strategic forces are summarized below:

(a) By the early 1990s, China will have deployed as many as 20 limited range ICBMs, 10 to 20 full range ICBMs, and follow-on versions of both.

(b) Effectiveness of China's full range ICBM may be improved by equipping the missile with multiple reentry vehicles (MRVs). China could do so by the late 1980s.

(c) CEPs (circular errors probable) of 1 kilometer or more will continue to limit ICBMs to strikes against countervalue targets.

(d) China probably will begin development of a solid-propellant ICBM during the 1980s. Significant deployment will not occur until the 1990s.

(e) By 1990, China probably will have deployed a new solid-propellant IRBM with a range of some 2,600 to 3,100 kilometers. It is estimated that about 30 of these missiles will be deployed by the mid-1990s, improving the mobility and survivability of its land-based, intermediate range nuclear force.

(f) The first nuclear-powered ballistic missile submarine (SSBN) will reach initial operational capability (IOC) between 1984 and 1987. It will carry 12 submarine-launched ballistic missiles (SLBMs) capable of delivering thermonuclear weapons to a distance of about 2,400 kilometers. By the 1990s, China could have up to four operational SSBNs, albeit of limited deployment capability.

(g) The Chinese will probably begin to equip some intermediate-range TU-16 bombers with 100-km-range, nuclear-armed air-to-surface missiles, possibly as early as 1986, making them a more important part of China's nuclear forces. The capability of these bombers to penetrate modern air defense will remain poor.

(h) During the latter half of the 1980s, China probably will improve its capability for tactical nuclear warfare by deploying short-range ballistic missiles (SRBMs) and possibly by modifying other weapons, such as land-based and seaborne cruise missiles, for tactical nuclear application. Simultaneous development and deployment of all these systems are unlikely.

(i) China will gradually enhance its strategic air defenses by deploying a small number of improved surface-to-air missiles (SAMs), additional fighter-interceptors, and aircraft equipped with electronic counter-countermeasures (ECCM).

(j) China will continue present programs for improving strategic C3 capabilities by providing more rapid, redundant, and survivable facilities for communications between national authorities and operational units. They will include the use of communications satellites and new ground-based systems derived from foreign technology now being acquired.

(k) China probably will continue development of an enhanced radiation weapon and could have enhanced

radiation bombs or missile warheads available as early as 1988.

(1) The number of deployed strategic systems is expected to remain small (60-120 total launchers). The pace of the strategic development will remain essentially at current levels. The technology transferred at present levels will assist in modernizing the force but not in accelerating its deployment.

(4) ~~(S/NOFORN)~~ Effect on the Sino Soviet and Sino-US Balance Under Existing Transfer Policy. Chinese strategic systems and Soviet uncertainties regarding their deployment will continue to deter Soviet nuclear strikes. During the '990s, Chinese strategic systems will continue to be developed for deterrence with the capability of delivering retaliatory strikes against the entire Soviet Union, including Moscow. More systems will be designed to penetrate Soviet ABM complexes by using MRV/MIRV and penetrating aid payloads. Deployment of a few SSBNs will add a new dimension to Chinese system survivability, complicating Soviet planning and enhancing Chinese deterrence, but they will not seriously threaten Soviet overall national security.

However, Soviet advances will be sufficient to maintain the present relative gap in capabilities, preventing China from gaining meaningful advantage in any aspect of strategic or tactical nuclear forces.

(5) ~~(S/NOFORN)~~ The ICBM threat to the continental US will not significantly increase. The addition of mobile SRBMs, MRBMs, IRBMs and some tactical systems will increase the potential threat to US and allied forces in Asia and give China increasing influence as a regional power. US advances will offset these new threats but deployment of appropriate counterforce systems may be required. China's development of tactical nuclear weapons will complicate US planning and operations for possible conflicts in Korea and elsewhere on China's periphery.

(6) ~~(S/NOFORN)~~ Nuclear Force Developments Under Liberalized Transfer Policy. It will not be possible for China to afford all of the military and military-related equipment and technology it desires. Even so, under conditions of greatly liberalized access to technology, Chinese nuclear force development priorities will remain generally the same as they are

now. Chinese threat perception and force weaknesses suggest the following system related priorities would be pursued:

(a) ICBM (reaction time, accuracy, survivability, MRV/MIRVs).

(b) MR/IRBM (propulsion, accuracy, reaction time, retargeting capability, mobility).

(c) SLBM (range, accuracy, MRV/MIRVs), SSBN performance.

d. (S/NOFORN) To achieve targeted qualitative improvements, the Chinese will likely focus on obtaining technology related to:

a. Attitude control.

b. Maneuvering propulsion systems.

c. Inertial components such as gyroscopes and accelerometers.

d. High-speed cameras and electronic diagnostic equipment to upgrade warhead reliability through improved measurement techniques.

e. Sophisticated aerial mapping survey programs to allow more accurate ballistic missile targeting.

f. Composite materials technology and filament winding techniques that could contribute to reducing the weight of missiles.

g. Manufacturing and design assistance for nuclear submarines which could substantially improve SSBN/SSN performance characteristics and reduce vulnerability to detection.

2 ~~(S/NOFORN)~~ Depending on China's ability to acquire or develop the appropriate technologies and translate them into operational systems, improved accuracy in ballistic missiles, development of MRV/MIRV capabilities, significant deployment of a solid propellent ICBM force and increased numbers, range, and accuracy in the solid propellent IRBM force can be expected under liberalized transfer policy. Enhanced strategic air

defenses--increased numbers of improved surface-to-air missiles and fighter-interceptors--would be achievable. China might revive attempts to develop, with greater prospects for success, a ballistic missile early warning system and antiballistic missiles.

(7) ~~(S/NOFORN)~~ Effect on the Sino-Soviet and Sino-US Balance Under Liberalized Transfer Policy. Improvements projected in Chinese nuclear forces under a liberalized policy will not close the gap in the Sino-Soviet balance. Soviet systems currently being developed and deployed, such as the SS-20, are sufficient to retain a large margin of superiority and could lower the value of the Chinese deterrent. China is, however, working to maintain its small but credible deterrent against Soviet strategic attack and in relative terms, to gain some measure of deterrence against Soviet use of tactical nuclear systems. Therefore, China is likely to continue its overt and covert acquisition of technologies that have application

to nuclear weapons development. Even with access to Western technology, China's force will remain limited in size and capability relative to the Soviet force.

(8) ~~(S/NOFORN)~~ Even under the best conditions, Chinese nuclear forces will not approach the quantitative or qualitative levels of US systems. However, a more capable Chinese strategic force will complicate US nuclear targeting policy and planning. Likewise, it can become a significant factor in arms reduction progress between the US and Soviet Union. In addition more capable Chinese nuclear forces may increase fears among US allies of Chinese coercion directed toward them. This increase in risk to US interests, inevitable in view of China's determination to upgrade its nuclear force, is more than balanced by the increased threat Chinese and Soviet upgrades pose for each other

b. (S) CONVENTIONAL FORCES. Chinese conventional forces pose no direct threat to the security of the United States. However, they are capable of threatening US interests and some of its allies. China has mounted, and

is capable of again pursuing, limited-objective operations in peripheral areas which could create situations involving superpower contention.

(1) ~~(S)~~ China's conventional forces are large but outdated. Beijing wants to reduce the size while improving the capabilities of its conventional defenses. To this end China is stressing force cutbacks, training to better exploit existing weapons, and improvements of old systems. Chinese forces are also experimenting with new tactics and employment doctrines. Nonetheless, conventional force modernization will be a slow, evolving process which will take advantage of selected transfer of technologies to augment domestic military development and production. Broad based improvement in conventional force capabilities are not expected until well into the 1990s.

(2) ~~(S/NOFORN)~~ Ground Force Developments Under Existing Transfer Policy China's ground forces are postured for defense. Sacrifices of territory and protracted conflict are the basis for coping with a

Soviet land invasion. Although measures have been taken to slow advancing enemy ground forces, and exact heavy losses, China cannot now mount a forward territorial defense, and its key industrial and political centers in the northeast remain vulnerable. This would be particularly true if tactical nuclear weapons and chemical weapons are used against the Chinese. China is not able to project its own forces much beyond its immediate border areas. Ground forces have major weaknesses in mobility, logistics, tactical C³ NBC warfare defenses, antiair and antiarmor defense, and joint service operations.

(3) ~~(S/NOFORN)~~ With existing access to technology, gradual, systematic efforts at force improvement will be aimed at insuring that Chinese ground forces retain, at a minimum, their current level of defensive capability against potential threats. Although the number of infantry and field artillery units will increase only slightly their operational proficiency will improve through more intensive training, better leadership, and some improved equipment. Given

Beijing's priorities for development, China will likely continue selective adaptation of available foreign military and dual-use technology to improve existing systems. In certain key areas, the Chinese may consider outright purchase of entire systems, or critical components thereof, although the expense involved makes this option less desirable.

(a) (S/NOFORN) More specifically, during the next 10 years the Chinese will continue gradually to upgrade armor, antitank capabilities, and overall ground force mobility. This will be accomplished primarily through continuing, and possibly expanding, indigenous development programs already in place. These programs involve the increased production of tanks and APCs, antitank guided missiles (ATGMs) (perhaps including helicopter-mounted models) modest amounts of self propelled artillery, and more transport and bridging equipment. The selective incorporation of mechanized infantry units into the force also will continue.

(b) (S/NOFORN) Generally, progress will be linked to success in overcoming larger economic and

technological constraints. China has had difficulty in bringing major new end items into serial production because of infrastructural weaknesses. This is illustrated by the problems the Chinese have encountered in developing a new, more modern main battle tank (MBT). Such a tank has been under development for over a decade. Initial plans probably were based on reverse-engineering of the Soviet T-62 or perhaps an early version of the T-64. Large-scale production would have required extensive retooling and, based on China's technical ability, could have developed a tank only marginally better than the current Type-69 (an upgrade of the Soviet T-54). The Chinese apparently decided to produce the Type 69 earlier than a T-62 copy as an interim measure while continuing efforts to develop a more modern tank. China's recent interest in highly sophisticated foreign tanks is unlikely to result in quantity purchases, because of budgetary restrictions and the wish to avoid dependence on

other nations. Instead, China will seek prototypes. If a priority effort were made, a follow-on tank with a modern gun, perhaps like the Soviet 115-mm (T-62) or the Western 105-mm, could be deployed by the mid-1990s. This tank would have fire control improvements, but it is unlikely that nonconventional armor or ammunition comparable to that of most modern main battle tanks could be produced. In any case, the degree of modernization achieved would depend largely on the amount of foreign technology obtained and assimilated.

(C) (S/NOFORN) In other priority weapons development areas, the Chinese are expected to continue deployment of the man-portable SAGGER-type ATGM, while purchasing from foreign sources the smallest number possible of a newer, more effective follow-on ATGM, which likely would include an agreement for technology acquisition and licensed production. A mobile surface-to-air missile may be deployed around 1985 and further development and deployment of hand-held systems is likely. An

improved infantry fighting vehicle during the 1980s is also projected.

(d) ~~(S/NOFORN)~~ Ground force improvements over the longer term--beyond the early 1990s--will likely continue to be gradual and modest, with top priority still on overcoming deficiencies in armor and antiarmor, air defense, and mobility, using Western technological assistance to the extent it is available and affordable. The Chinese will likely continue to rely on numbers to compensate for the technical inferiority of their ground forces, and the associated high cost of modernization. Nevertheless, an expanded R&D and production infrastructure should enable fielding of new generations of ground force weaponry in limited number by the mid 1990s. In particular, a new main battle tank based on Western designs is expected to replace the interim Type-59 and Type-69. There should also be new or greatly improved upgrades of self propelled field artillery, ATGM's, MRLs, antiaircraft artillery,

and SAMs, and more extensive use of mechanization and helicopters in support of ground operations.

(4) ~~(S/NOFORN)~~ Effect on Sino-Soviet and Sino-US Balance Under Existing Transfer Policy. The new decade will see China slightly improving its defensive capability against a land invasion by the Soviet Union, even though the Soviet forces along the border have been increasing at the rate of roughly a division every other year. This judgment is based on the assessment that China will have an improved capability to maneuver combined arms forces against an invader and to contest an invasion from more forward positions. Gradual improvements in China's armored forces, the deployment of ATGMs, the mechanization of several infantry divisions, and the improved ground support and air-defense capabilities of the air forces will give the Chinese greater defensive firepower and flexibility. Still, the level of technology embodied in new Chinese weapons will remain appreciably inferior to those of the Soviet Union and will not significantly alter the military balance. In

addition, it will take some time, probably not until the mid-1990s, for China to absorb thoroughly any technologies introduced in the 1980s and for it to develop production lines, doctrine, and training for the effective employment of conventional weapons based on these technologies.

(5) ~~(S)~~ Chinese power projection capabilities will not be significantly enhanced this decade and probably into the 1990s. Training and doctrinal improvements will result in better combined arms and joint service capabilities. However, the impact of Chinese ground force modernization will not appreciably affect US and allied security or interests through the 1990s.

(6) ~~(S/NOFORN)~~ Ground Force Developments Under Liberalized Transfer Policy. Chinese priorities for ground forces developments under conditions of increased access to technology will remain much the same as they are under existing conditions. The types of equipment/technology listed below are China's highest ground force priorities:

1. Point defense/tactical surface-to-air missiles.

2. Modern antiaircraft guns.

3. Antitank guided missiles.

4. Logistics management techniques, automated inventory systems.

5. Armored infantry fighting vehicles.

6. Improved artillery tubes.

7. Counter-battery radars.

8. Tanks and tank engines.

9. Self-propelled guns

10. Night vision devices, optics.

(7) ~~(S/NOFORN)~~ Effect on the Sino-Soviet Balance and US Interests Under Liberalized Transfer Policy. With liberalized access, significantly improved antiarmor and tactical air defense capability can be expected. Better mobility will be brought about through increased numbers of improved armored vehicles, self-propelled artillery, and mobile antitank systems. Initial deployment of a follow-on main battle tank approaching the world standard, possibly incorporating nonconventional armor and near

state-of-the-art munitions, would be possible by the mid-1990s. It is emphasized that many of the technologies listed above have been approved for transfer, but China has not yet chosen to purchase them. Thus, it appears that liberalized access will not necessarily result in an appreciable upgrading of ground forces unless Chinese procurement decisions are changed. The relatively modest priority accorded ground force modernization, and the vast size of the force to be reequipped, makes the potential low for any significant increase in risk to US interests and allies from transfers of advanced dual-use or conventional arms technology to PRC ground forces

c. ~~(S/NOFORN)~~ AIR FORCES/STRATEGIC AIR DEFENSE. China's air forces are capable of defending against most neighboring forces. China's large fighter force could probably exact a high cost, but not prevent destructive air strikes by the US or USSR. China's own air power projection is, for practical purposes, limited to tactical fighter range. Bombers lack penetration aids

and autonomous defenses. Obsolescent aircraft--early model MiG-19s and MiG-21s are the best China has in quantity--and their lack of ECM, modern sensors, and modern weaponry represent significant weaknesses in Chinese defenses and power projection capability. In addition, poor low-altitude radar coverage, the inadequate strategic SAM system, the lack of point defense SAMs C^3 vulnerability to ECM, and a cumbersome air defense battle management system prevent even China's older model aircraft and existing ground-based defenses from being used to full advantage.

(1) ~~(S/NOFORN)~~ Air Force Developments Under Existing Transfer Policy. The Chinese Air Force will improve its basic capabilities in every element of air power under existing conditions of technology access. Advances in air-intercept radars and fire control systems will be particularly notable during the 1980s, as will be the arming of the entire fighter force with air-to-air missiles (AAMs). These improvements will flow from actions Beijing has already taken to gain technology access and assistance from Western systems.

Early warning and ground-controlled-intercept (GCI) radars as well as the basic command and control communications will be improved. Beijing will make limited progress, on its own, in developing and deploying air-to-surface missiles (ASMs). Like many other indigenously developed systems, the Chinese ASM will be elementary technologically, but its impact on overall capability, coming as it does to an air force presently lacking any ASMs, is significant.

(a) ~~(S/NOFORN)~~ Fighter aircraft engines will be enhanced, probably with some foreign assistance. However, the 1980s will be spent assimilating the technology required for indigenous engine production. Greater progress will be made in production of surface-to-air missiles based on Western technology, but progress will be measured, and the technological level gained will be second rate. Minimal progress will be made in ECM and ECCM systems, but when China's present rudimentary capability in electronic warfare is considered the impact of the progress will be significant.

(b) ~~(S/NOFORN)~~ Little change is expected during the 1980s in bomber navigation systems. By and large, systems will be developed indigenously, and based upon knowledge acquired working with commercial aircraft navigation systems. The prospect is slim for developing a close air support capability given the relatively low priority assigned to deployment of ground-air communications equipment. Continuing, but inspectacular, progress will be made in air force intelligence collection systems. China will purchase a limited amount of SLAR and photo equipment, probably from the United States, but neither the scale of deployment nor the processing and reporting infrastructure will be adequate for effective utilization.

(c) ~~(S, NOFORN)~~ Because of the slow start toward modernizing the Air Force in the 1980s, progress in the 1990s will be comparatively modest. The early nineties will see a burgeoning of both R&D and production facilities. In the late nineties,

this infrastructure will begin to produce, and China will come into its own in the areas in which it had an early start in the 1980s, such as AI radar and fire control, EW and GCI radars, command and control, and ASMs. However, overall air force capability will still lag far behind the USSR and US. It will not be until the 21st century that China will be able to halt the widening gap

(2) ~~(S/NOFORN)~~ Effect on the Sino-Soviet and Sino-US Balance Under Existing Transfer Policy. The Chinese Air Force will improve basic capabilities particularly in AI radars, fire control systems, and AAMs. It will greatly increase the present 100-to-200 hour time between major engine overhauls. These fundamental improvements, accomplished primarily through application of Western technology, will upgrade overall air force effectiveness. For the most part, however, continuing Soviet developments can be expected to offset Chinese gains and there will be no significant relative change in China's present vulnerability to Soviet air attack Of greater long-term

importance will be China's enhanced potential for development in the 1990s of a more sophisticated military aricraft industry, able to produce more advanced fighter aircraft with capabilities which narrow the gap between Chinese and Soviet air forces.

(3) ~~(S/NOFORN)~~ The limited gains expected under existing conditions of development would have no direct effect on US security. Enhanced fighter forces, deployment of even a very basic ASM capability and upgrades of China's land based air defense C^3, however, increases the threat on China's periphery. Aside from the impact on a Korean Peninsula conflict and the antishipping threat to US and allied navies posed by Chinese ASMs, the threat to Taiwan is probably of most concern. Taiwan depends on the technical superiority of its relatively small fighter force to defeat the large numbers of obsolete aircraft China could bring to bear. With an enhanced Chinese fighter capability the value of the Taiwan air deterrent will decrease.

(4) ~~(S/NOFORN)~~ Air Force Developments Under Liberalized Policy. Under conditions of substantially liberalized access to technology, China can be expected to press for the following technologies/equipment:

(a) Airborne ECM/ECCM.

(b) Missile jamming equipment.

(c) Air search and air-intercept radars.

(d) Airborne pulse doppler radar.

(e) Infrared air to air missiles.

(f) Advanced jet engines, and associated metallurgy, protective coatings, and manufacturing techniques.

(g) Avionics.

(h) Fighter inertial navigation systems.

(i) Radar warning receivers

(j) Air surveillance radars.

(k) Advanced fighter aircraft.

(l) Antiradar reflective technology.

With a major influx of foreign technology, China could produce an engine comparable to the GE-F100 by the mid-1990s.

Furthermore, Chinese engineers educated in the US and Europe will be familiar with even more advanced propulsion systems and concepts. China's capability to produce radars, fire-control systems, AAMs, and ECM/ECCM could approach near state-of-the-art, trailing counterpart US technology by perhaps as little as five years vice the present twenty-plus years. The majority of aircraft in the inventory will remain dated, but the capability to produce more modern airframes could exist by the mid-1990s if Chinese priorities were allocated to inventory expansion. Bomb navigation systems, ASMs, PGMs, and close-air-support techniques will be advanced to give China a meaningful ground attack capability. China's capability in air force intelligence collection will be only marginal unless resource allocations are increased.

15. ~~(S/NOFORN)~~ Effect on Sino-Soviet Balance and US Interests Under Liberalized Transfer Policy. These new developments will not be numerically sufficient to defend absolutely against a determined Soviet attack

but they will force the Soviet Union to pay heavily in aircraft. This defensive counterair capability, unlike the present situation, will provide sufficient cover for Chinese ground and armor forces, further increasing Soviet costs and planning difficulties. The deterrent effect of this growing capability will expand with the inventory even though Moscow will continue to hold the ultimate ability to gain air superiority over contested areas.

(6) (S/NOFORN) Enhancements in Chinese air capabilities would also present increased threats to US forces and allies in Asia. Development of long-range penetration aircraft in particular would alarm US allies and might require US upgrading of allied capabilities and US theater forces. The air imbalance in the Taiwan Strait is likely to tilt even more towards China's favor.

d. (S) NAVAL FORCES. China's Navy is basically a coastal defense force composed of small fast combatants many of which are equipped with early model Soviet cruise missiles. This force could inflict heavy losses on enemy

ships operating near coastal areas. China also has a large fleet (110 units) of medium range diesel submarines which pose a formidable threat in China's adjacent seas, key Asian choke points, and along Western Pacific SLOCs. The Chinese inventory of principal combatants--destroyers and frigates--is capable of sustained, long range operations but cannot effectively challenge modern navies on the high seas or in distant confrontation zones because of major weaknesses in sensors and weaponry. The lack of shipborne surface-to-air missiles, ASE torpedoes, modern electronics and poor tactical C³ and battle management systems render major combatants ineffective in comparison to US or Soviet forces. China's amphibious force can lift 3-4 light divisions to short range objectives.

1) ~~(S/NOFORN)~~ Naval Force Developments Under Existing Transfer Policy. Under existing transfer guidelines the Navy will make only modest improvements in overall capability. Gradual improvements in electronics, weapons, and propulsion together with improved training techniques will contribute to the extension of navy missions beyond that of coastal defense. Air

defense, ASW, and C^3 will likely receive most attention in the surface fleet. The submarine force will likely benefit from improved propulsion, quieting techniques, and torpedoes. The few nuclear-powered attack submarines (SSNs) in the inventory will likely have only limited utility during the period due to rudimentary desin and subsystem technology. No significant advances in naval aviation are anticipated

(?) (U) Effect on the Sino-Soviet and Sino-US Balance Under Present Transfer Policy. Anticipated Chinese naval developments are unlikely to cause any significant change in the wide disparity between Chinese and Soviet Pacific Fleet or US naval capabilities. In any Sino-Soviet conflict, the Chinese Navy would probably attempt to deny Soviet naval units unencumbered movement in seas bordering China, using submarine deployments, mining, and harassment tactics. But these activities would probably do little more than complicate Soviet planning and operations. Similarly, Chinese naval forces could complicate US naval operations in border seas.

(3) ~~(S)~~ Naval Force Developments Under Liberalized Transfer Policy. Improvements in Chinese naval capabilities are unlikely to have any significant impact on US forces in the region during the remainder of this century.

(4) ~~(S)~~ Under conditions of substantially liberalized access to technology, technology and equipment will be sought in these areas:

(a) Shipborne SAMs.

(b) Sonars.

(c) ASW torpedoes.

(d) Combat/tactical data management systems.

(e) Early warning radar.

(f) ECM/ECCM.

(g) Gas turbine propulsion systems.

(h) Antishipping missiles.

(i) Fire control systems.

(j) Communications systems.

(5) ~~(S/NOFORN)~~ With significantly increased Western technology available the Chinese Navy will develop an improved coastal defense capability and will move

toward an increased, but still limited, ability to project its influence beyond the China Seas. Due to the role, size, and composition of the fleet, substantially increased capabilities will take considerable time. Significant improvements will likely be manifested in a new generation of surface combatants and submarines which will begin to enter the fleet during the 1990s. These new ships and submarines will represent a vast qualitative improvement over the rest of the fleet. However, they will remain inferior to comparable units in the US and Soviet navies. Further, production runs extending into the 21st century will be required before the capabilities of the coastal defense force and blue water surface and submarine forces could be attained. Substantial advances will likely be made over the current rudimentary ASW capability, but neither US nor Soviet submarine operations will be seriously threatened.

(6) (✓) Effect on Sino-Soviet Balance and US Interests of Liberalized Transfer Policy. With significantly increased access to Western technology, China's

coastal defense capabilities are likely to improve during the 1990s making a Soviet assault from seaward increasingly difficult. Chinese ability to inhibit or significantly interfere with Soviet naval operations in the Pacific theater will remain marginal.

(7) (S) While improvements in Chinese naval capabilities will have little or no impact on US forces in the region, they could threaten critical sea lines of communication of key US allies or friends, thereby complicating US planning considerations.

5 (U) Conclusions

a. (S) Beijing will continue to value its relationship with the US for the leverage it provides against Moscow and for the contribution it makes to China's development. Despite this perception, Chinese leaders will remain committed to pursuing an "independent" foreign policy in which compromise on basic Chinese interests (e.g., sovereignty over Taiwan) in exchange for other desired objectives such as advanced technology or a security commitment will be strongly rejected.

(b) ~~(C)~~ While military modernization will remain a key objective, it will have to be accomplished with limited resources. Capital invested in improving China's current military capability is capital that cannot be used to develop the overall level of industrial technology. A recent statement by Yang Shangkun, executive vice-chairman of the CCPCC Military Commission is illustrative. ". . . the main task at present is to speed up the development of modern weapons for the Army . . . (we urge) all involved in weapons development to concentrate their efforts on the rapid production of high quality modern weapons for the armed forces by mainly relying on their own efforts and on less funding."

(c) ~~(C)~~ Given a projected long-term limitation on resources available, Chinese defense planners will be forced to make trade-off decisions concerning weapons developed or acquired. Even under the best of circumstances, China will be unable to fulfill all of its priority defense needs in the next 20 years. If the Chinese were to concentrate all available resources on their top several defense objectives, substantial strides

probably could be achieved while remaining mission areas would be significantly degraded. However, Beijing is expected to continue to seek to develop a broad-based, more balanced approach to force development. This will result in generally lower capability levels than would be the case if a more selective process were adopted.

(d) (C) Nevertheless, upgrades in Chinese capabilities improve not only their ability to confront Soviet forces, but also those of the United States. Thus, to the extent that US technological assistance might give China a marginal gain in the Sino-Soviet military balance, it also involves a certain degree of risk for US forces.

(e) (C) Based on the foregoing analysis and forecasts, the Chinese will be able to achieve threat levels that are directly challenging to the United States in only a few areas. The most significant is that of strategic missiles and nuclear weapons, with lesser risks involved with upgrades of ground and air forces. The Chinese will pursue development of these capabilities despite continued paralleling of some interests with the West, and regardless of the level of Western technology made available.

(f) ~~(C)~~ The significance of the threat which these developments potentially pose for the US is offset and ameliorated by the concurrent threats they pose to the Soviet Union, which is judged to have already calculated into their defense planning substantial Western assistance to China's force development.

(g) ~~(S/NOFORN)~~ In the near term, the threat to the United States is further offset to the extent the US can control the type and rate of technology transferred and monitor improvements. This is particularly feasible given the preliminary stage of most Chinese development projects.

(h) ~~(S/NOFORN)~~ At some point, however, the effects will become increasingly difficult to control because technology evolution is a progenitive process: the more technologies China assimilates, the greater will become its capacity for technology generation. Therefore, in military areas of potential criticality, the transfer of selected military end items or components, and the continued case-by-case review of key advanced dual-use technologies is required to maintain possible risks to US interests at a manageable level.

(i) ~~(S)~~ Based on Chinese S&T priorities and requirements, and on what we know about the scope, pace and direction of their R&D effort, it is unlikely that China will have the capability to seriously threaten US interests before the turn of the century. While Chinese advances before the turn of the century will not pose a serious threat to US forces, enhancements could impact susbstantially on US allies and interests--most notably South Korea and Taiwan. Because of the political sensitivities attendant with US-China-Taiwan relations, upgrading of Taiwan defenses to keep pace with developments on the mainland will pose difficult problems. Most critical will be maintaining Taiwan's technical superiority in air defense, primarily fighter aircraft.

(j) ~~(S)~~ The most important effects of significant liberalization in technology transfer policy to China will not be manifest until the turn of the century. At the mid 1990s point and beyond, the synergistic effect of multiple technologies and weapons systems, acquired legally or illegally, coupled with faster than expected PRC technological progress, could pose serious threats to the United States, its allies, and its interests in the 21st century.

SECTION II--CREDIBLE THREATS TO US INTERESTS ASSOCIATED WITH THE TRANSFER OF CONVENTIONAL WEAPON SYSTEMS AND DUAL-USE TECHNOLOGY (C)

1. ~~(S)~~ In Section I of this assessment, "threat" and "risk" were defined. The purpose was to provide clear distinctions between two often confused concepts. The definitions are reiterated here:

a. ~~(C)~~ Risk--"possibility of loss or injury: peril."* As applied to the transfer of conventional weapons and dual-use technology, any transfer that increases the military capability of the PRC entails some risk to US interests. Risk remains at an acceptable level, or manageable level, if the ability of the United States to defend its interests is not called into question.

b. ~~(C)~~ Threat--"1: an indication of something impending, 2: an expression of intention to inflict evil, injury, or damage."** A threat ensues when the PRC develops a capability to jeopardize either US interests or the ability of the United States to defend its interests.

* Webster's New Collegiate Dictionary, 1975, page 1000
** Ibid, page 1215

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2. (S) The PRC can pose threats to US interests but not risks. Transfers of technology by the United States may contain risks that China will use that technology in a threatening way. As discussed earlier, those PRC threats are offset by numerous other factors.

3. (S) The terms "credible threat," "credible risk," and "major risk" to US national security have been used interchangeably when discussing the risks to US interests posed by transfers of dual-use technology to China, resulting in some confusion. With the distinction provided by the above definitions, such confusion can be eliminated. It is important to note that any threat is, ipso facto, credible. Lacking credibility, it would not be a threat.

(S) In May 1983, the Joint Chiefs of Staff concluded that "major national security risk in the transfer of technology occurs when the transfer of single and combined technologies would allow the enhancement of PRC military capabilities to a degree that would degrade the technological advantages US and allied forces require to maintain a margin of military superiority or threaten vital US national security interests." That definition is still valid. It takes into account the continuing development of military capabilities by China, the Soviet Union, and the United States. Also, it

implies that transfers of technologies that would not allow enhancement of Chinese capabilities to a threatening level do not increase Chinese threats to US interests, although these transfers may pose the risk that the Chinese will use the technology to improve their military capability.

5. ~~(S)~~ The previous JCS definition, while still valid, is not intended to stand alone as the single determining factor in reviewing cases. Rather, it implies a process to determine whether or not a proposed transfer serves US interests.

6. (U) Conclusions and Recommendations

a. ~~(S)~~ The above definitions of risk and threat as applied to the transfer of conventional weapon systems and dual-use technology should be adopted. They should be used when considering the positive and negative aspects of the transfer of technology and weapon systems.

b. ~~(S)~~ The terms "credible threat," "credible risk," and "major risk" should be avoided. Strict adherence to the definitions of risk and threat contained in this study will facilitate proper focus and prevent confusion.

c. ~~(S)~~ The May 1983 JCS definition of major national security risk in the transfer of technology is still valid and should be included as a consideration during the case review process.

SECTION III--REASSESSMENT OF THE SPECIAL MISSION AREAS (C)

1. ~~(S)~~ The Special Mission Areas were first defined on 4 June 1981 in a Presidential Directive on Export Control Policy to China. That directive authorized the transfer of technology at significantly higher levels, while maintaining case-by-case review to "minimize national security risks in the Special Mission Areas of nuclear weapons and their delivery systems, electronic and anti-submarine warfare, and intelligence gathering."

2. ~~(S)~~ In the overall context of that Presidential directive, it is clear that the President intended to substantially raise the levels of technology to be made available. The Special Mission Areas were originally conceived as a guideline for identifying those technologies whose transfers would lead to Chinese military developments that would threaten US interests. In this regard, the Special Mission Areas are both too broad and too narrow. They are too broad in that they have been interpreted to include a very wide range of basic technologies that, if

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strictly applied, could be used to develop some undefined degree of military capability in the Special Mission Areas. They are too narrow in that they do not address other technologies the PRC could use to develop capabilities that would threaten US interests.

3. ~~(S)~~ The Special Mission Areas should have their focus broadened to encompass the other areas critical to protecting US interests power projection, and air superiority. These should be added to the four previously defined areas.

4. ~~(S)~~ A new term is required to encompass all six and, to prevent confusion, should be called "Critical Military Capabilities." A Chinese capability in these Critical Military Capabilities that could threaten US interests is to be avoided. In order to determine how transfers of technology and weapon systems may affect these, it is necessary to assess and project Chinese capabilities in each:

a. ~~(S/NOFORN)~~ Long-Range Nuclear Weapons and Delivery Systems. China's current strategic threat to the US landmass rests solely in its two CSS-4 ICBM launchers. The CSS-4 is an 8,800-nm missile with one warhead of

about 4 to 5 megatons. This strategic missile force will increase to about six launchers in the next 5 years and will retain its character as a countervalue deterrent rather than a counterforce system. Technological evolution will probably yield greater accuracy and reliability, but China will probably not have MRV and MIRV capabilities before the early 1990s. Generic as well as specific technology transfer will affect the quality and proliferation of Chinese systems. However, even under the best of acquisition circumstances the Chinese strategic force will not approach the quantitative or qualitative levels of the US force and China will continue a limited-deterrent nuclear strategy. China will almost certainly adhere to a no-first-use policy.

b. ~~(NOFORN)~~ Electronic Warfare. Without direct and extensive assistance from the West, China is unlikely to pose a major EW threat to US or allied systems in this century.

c. ~~(S/NOFORN)~~ ASW. At present, the Chinese Navy is not capable of protecting vital SLOCs against any adversary with quiet submarines. China's current ASW capabilities against US submarines are very limited and will remain so for the foreseeable future. Only through large-scale acquisitions of current state-of-the-art Western systems could the Chinese Navy approach the ranks of a world class naval force by the turn of the century and threaten US submarines.

d ~~(S/NOFORN)~~ Intelligence Collection. China is working to improve its technical intelligence collection and processing capabilities. Advances in these areas, particularly in SIGINT collection and exploitation, are expected with the application of dual-use technology already available. Overhead imaging systems are being tested. Within the decade China will probably have the capability for periodic overhead monitoring with resolutions of 1-3 meters in a recoverable film capsule system. Overhead SIGINT and infrared detection systems are probably under development, but [illegible] capability without significant infusion [illegible]

technology is probably a decade away. Relevant technological know-how and systems integration in the areas of analysis and cryptologic technologies are not likely to ever be available through commercial means.

e. ~~(S/NOFORN)~~ Power Projection. China's capability to project military power by air and seaborne forces is currently limited and poses little threat to the interests and security of the United States and its allies and friends. For China to attempt to improve those capabilities to a threatening degree would indicate a change in Chinese policy and strategy, thus jeopardizing bilateral relations and seriously increasing the potential for hostilities. In order for the Chinese military to develop a credible capability for power projection in the region, it would be necessary to develop major technological and doctrinal advances in virtually all conventional mission areas necessary for modern-day, multi-threat environments. These include ASW, air defense, EW, tactical command and control, logistics, transport, ground force mobility, and all-weather capabilities. Many of these limitations can be overcome within the next two decades, but massive foreign military equipment, technology, and training infusions would be required. China will not have either the economic

wherewithal or inclination to adopt such an approach during this century.

f. ~~(S/NOFORN)~~ Air Superiority. The technological lead enjoyed by US and allied air forces is essential to fulfilling US regional objectives. For China to deploy systems that would either defeat US and allied systems or prevent US and allied air forces from establishing and maintaining air superiority would pose a grave threat. Only if it acquired the most advanced US/Western technology or weapon systems in the near term and was provided appropriate follow-on upgrades could the PRC achieve this degree of capability. Short of this, Chinese air defense capabilities will show significant improvement because of the high priority they are accorded. Given a restriction of the most advanced US/Western technology, however, China would be able to inhibit but not ultimately defeat combined and allied air forces.

~~(S)~~ The redefinition of Special Mission Areas, which produced the recommended Critical Military Capabilities, does not address their primary problem--that they encompass too wide a range of technologies to be analytically useful. To narrow their focus and lay the foundations for the analytical framework requested in the second task, it is

necessary to subdefine them. This involves identifying the types of technologies whose transfer could modify the above judgments. These fall into three broad categories: The first consists of those rapidly developing technologies where the United States must reserve to itself the cutting edge of production capability, but not object to transfers of less advanced technology. The second is sensitive state-of-the-art, military-related technologies and weapon systems. The third consists of mature, sensitive technologies.

a. (S) Basic Production Technology. US leads in both weapon systems deployment and basic production technologies virtually guarantee the superiority of deployed US systems through the turn of the century. The US lead could be degraded if the PRC were granted access to the most advanced forms of basic production technology. Proposed transfers of less advanced production technologies should be reviewed to insure that they serve US interests.

b. (S) Military-Related Technologies and Weapon Systems. There are certain state-of-the-art military or military-related technologies and weapon systems that, if transferred to China, could degrade the required US margin of advantage. These include already developed

systems and technologies in the fields of EW, ASW, C^3, and precision-guided munitions. The United States must maintain a generational lead in these technologies and weapon system. Other, less capable technologies and systems require case-by-case review to determine their impact on Chinese capabilities and US interests.

c. (S) Mature, Sensitive Technologies. Mature, sensitive technologies the PRC could, over time, perhaps develop through its own research and development efforts would threaten US interests. These include most militarily useful nuclear technology, fiber optics, solid and stable-liquid missile propellants, Stealth, submarine silencing, high-energy lasers, composite armor, etc. The United States and its COCOM partners, the only likely sources of these types of technology for China, must maintain stringent controls on these technologies. There are no occasions presently envisioned where transfers of these technologies would serve US interests.

6. (S) In order to reduce the likelihood of China improving its military capabilities to a level that would threaten US interests, i.e., the Critical Military Capabilities, it is necessary to prevent the transfer of:

a. Basic production technologies at their most advanced stages.

b. State-of-the-art, military-related technologies and weapon systems.

c. Sensitive, military-related technologies that the United States shares only with its closest allies or maintains rigorous unilateral control.

7. (S) Transfers of other, less capable technologies and weapon systems will eventually raise the level of Chinese military capabilities, but are not likely to significantly increase the threats these may pose to US interests. A case-by-case review of all weapon systems and military-related technologies is required.

8. (S) Two other phrases in the Presidential Directive of 4 June 1981 have proven difficult to interpret:

". . . minimize national security risk . . . ," and

". . . a technical level approximately twice that provided to the Soviet Union . . . ."

a. (S) The phrase "minimize national security risk" has often been interpreted to mean any possible risk to stated US national security interests. This has led to a generally restrictive approach regarding technology transfer to China. Lacking an overall strategic assessment such as that in Section I of this study, it was not at all clear that Chinese military improvements would be modest, threatening US interests in only a few

areas (notably nuclear), and that the PRC would continue to develop those threatening capabilities to some degree, with or without access to US or other Western technology. In light of this analysis, a substitute phrase is recommended: "maintaining national security risk at a manageable level." This substitution takes into account Chinese development, with or without access to Western/US dual-use technology of certain military capabilities that may threaten US interests. It implies that the United States should seek to manage the risk by preventing transfer of those technologies and systems that could subsequently be used to develop a capability that would jeopardize US interests, the technologically superior US military forces, or the ability of the United States to defend its interests.

The "Two Times Rule," as it is commonly referred to, represented a significant step in 1981, insofar as it distinguished China from the Soviet Union and its Warsaw Pact allies. Since that time, however, US policy toward the PRC has continued to evolve. The recent announcement by the Secretary of Commerce that the United States would liberalize and streamline its controls, and shift China to Category V while maintaining national security review was a major step in the evolution of US policy.

(1) (S) One result of Secretary's announcement was that it raised Chinese expectations. PRC leaders anticipate substantially higher levels of technology than previously, when the "two times" rule pertained. The judgments contained in the previous sections of this assessment support substantially increasing the level of technology to be made available to the PRC well beyond its "two times" level.

(2) ~~(S)~~ It is recommended that the phrase ". . . a technical level approximately twice that provided to the Soviet Union . . ." be dropped. It is currently inappropriate and may prove to be counterproductive.

9. (U) Conclusions and Recommendations

a. (S) In order to reduce the likelihood of China's improving its military capabilities to a level that would threaten US interests--the Critical Military Capabilities and other areas of military capability in which the United States must maintain technological superiority--it is necessary to prevent the transfer of:

(1) Basic production technologies at their most advanced stages.

(2) State-of-the-art military-related technologies and weapon systems.

(3) Mature, sensitive technologies that the United States shares only with its closest allies or over which it maintains rigorous unilateral control.

b. (S) Transfers of other, less capable technologies and conventional weapon systems will eventually raise the level of Chinese military capabilities but not significantly increase the threat these may pose to US interests.

c. (S) The phrase "minimize risk to national security" should be replaced with the phrase "maintaining national security risk at a manageable level" for the purposes of considering transfer of conventional weapons and dual-use technology to China.

d. ~~(S)~~ The phrase ". . . technical level approximately equal to that provided to the Soviet Union. . . ." should be dropped.

~~SECRET~~
~~NOT RELEASABLE TO FOREIGN NATIONALS~~

ENCLOSURE A

SECTION IV--ANALYTICAL FRAMEWORK FOR EVALUATING THE NET STRATEGIC IMPACT OF CONVENTIONAL ARMS AND TECHNOLOGY TRANSFER (U)

I. (U) Introduction and Summary

a. (S) An analytical framework for effectively evaluating the net strategic impact of conventional arms and technology transfers contains two elements. The first is an analysis of the effect specific technologies have on developing military capabilities that could influence the strategic balance. The second consists of an assessment of the dynamic political, economic, military, and psychological factors that contribute to the regional and global strategic balance. To insure that US transfers of technology and conventional weapons systems to China continue to serve US interests, it is necessary to continually monitor and project Chinese intentions and capabilities.

b. (S) This section assesses the net strategic impact of transfers of technology and conventional weapons systems

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on US interests. It does so by identifying US objectives and establishing criteria to judge whether or not the transfer of a technology or weapon system supports those objectives.

2. ~~(U)~~ Discussion

a. ~~(S)~~ US strategic objectives for East Asia and the Pacific emphasize protecting vital US interests and preventing the Soviet Union, North Korea, and Vietnam from expanding their influence in the region. In addition, the United States seeks to maintain the confidence and vitality of regional friends and allies. US policy toward China affects US relations with regional states. To maintain effective deterrence and warfighting capability, US military strategy for East Asia contingencies rests on the twin pillars of coalition defense and rapid deployment/reinforcement of US forces.

b. ~~(U)~~ The defense of US interests in East Asia requires:

(1) Insuring the vitality and confidence of regional allies and friends.

(2) Maintaining lines of communication to effectively deploy and reinforce US and allied forces.

(3) Defending US bases and facilities.

(4) Establishing and maintaining control of the air and sea.

(5) Conducting combined operations in defense of US and allied territories and vital interests.

(6) Isolating the battlefield and destroying enemy forces.

~~(S)~~ The United States employs numerically inferior forces in Asia that rely on technological superiority to maintain combat effectiveness. Allied countries, notably Japan and South Korea, continue to improve the technological capabilities of their forces, though these lag behind the United States. In spite of these allied advances, technologically superior US forces must be employed for combined operations to effectively counter any aggressor in East Asia.

d ~~(S)~~ The Soviet Union is considered the major threat to overall regional security while North Korea and Vietnam pose more localized threats. Due to its expanding ties with the West, China is judged to pose far less threat to US interests in the region. A conflict on the Korean

Peninsula is one scenario where conflicting US and Chinese interests might lead to military activity. Even so, it is judged that China would likely provide only political and logistic support in such a scenario, unless North Korea were on the verge of defeat or China's territory threatened. Of lesser probability would be conflict associated with the defense of Taiwan against PRC hostile actions, in which US air and naval forces may participate.

e. ~~(S/NOFORN)~~ A key US strategic interest in Asia is to deny the USSR the capability to achieve a position of political and military dominance in the region. China, by virtue of its size, geostrategic position, distrust of the Soviets, and by its large armed forces, plays an important role as a counterweight to Soviet power in Asia. It is in this sense that the development and maintenance of a Chinese armed force capable of providing a counterbalance to Soviet forces in Asia is in the US interest. Conversely, improved Chinese military capabilities can pose a potential threat to certain other US interests, objectives, and missions in Asia.

3. ~~(S)~~ Framework for Analysis. In constructing an analytical framework for evaluating the net strategic impact of conventional arms and technology transfers, it is necessary to integrate the findings of previous sections of this study. The analytical framework proposed is a two-stage evaluation process ("Red and Green lines" are being established in an interagency forum separate from this effort). This analytical framework will as a matter of course require periodic readjustment to insure compatability with changing events.

a. ~~(S)~~ The first stage is to determine whether the license request involves the transfer of a technology in one of the three Sensitive Technological Areas defined in Section III:

(1) Basic Production Technology.

(2) Military-Related Technologies and Weapons Systems.

(3) Mature Sensitive Technologies.

If a technology falls in the third Sensitive Technological Area, it should be immediately rejected. License requests in the first two Sensitive Technological Areas should be subjected to a third stage of analysis.

b. ~~(S)~~ The second stage draws heavily on the strategic assessment presented in the first section, as well as the

Critical Military Capabilities (Redefined Special Mission Areas) proposed in the third section. To insure that US transfers of technology and conventional weapons systems serve US interests, it is necessary to continually monitor and project Chinese intentions and capabilities. The following criteria should be used in judging whether or not the transfer of a technology or conventional weapons system supports US strategic objectives:

(1) Does this transfer have a positive influence on the global strategic balance?

(2) How does it affect current and forecasted Chinese relations with the United States?

(3) Does it contribute to military capabilities that China is developing that could threaten US interests?

(a) Will the new capabilities pose a threat to US interests?

(b) Will the military capability permitted by this transfer permit the Chinese to defeat US systems in use at the time of IOC of the Chinese system?

(c) Is this transfer needed to develop the threatening capabilities?

(4) Would this transfer constitute precedent for further sales to China and other countries that would not be in US interests?

(5) What capability does China have to integrate the technology into advanced weapons systems?

(6) What steps can the US take to control or inhibit Chinese acquisition of required technologies?

(7) Will the cause and effect dynamics of improved military capabilities and altered intentions pose threats to US interests?

c. ~~(U)~~ If the license request satisfies the conditions of the foregoing criteria checklist, approval should be granted.

~~SECRET~~

ENCLOSURE B

DRAFT

MEMORANDUM FOR THE ASSISTANT TO THE PRESIDENT FOR NATIONAL SECURITY AFFAIRS

Subject: Assessment of the Benefits and Risks in the Transfer of Advanced Technology and Conventional Arms to China (U)

1. ~~(C)~~ At an interagency group meeting chaired by the Director of Political-Military Affairs, NSC, the Department of Defense was requested to address four issues in connection with the recent decision to liberalize the transfer of technology to China. These are:

a. ~~(C)~~ Assess the impact of technology transfer and conventional arms sales on the Sino-Soviet and Sino-United States military balance.

b. ~~(S)~~ Develop an analytical framework for evaluating the net strategic impact of conventional arms and technology transfers across a broad range of technologies.

c. ~~(S)~~ Redefine credible threat to US interests, taking into account the above analysis.

d. ~~(C)~~ Establish a more rigorous subdefinition of the Special Mission Areas.

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BY Joint Staff
DATE 11/8/10

~~SECRET~~

2. (S) The attached assessment by the Joint Chiefs of Staff has been adopted as the DOD position. I recommend that it form the strategic foundation for the new policy in regard to the transfer of advanced technology and conventional arms to China.

Attachment

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THE WHITE HOUSE

WASHINGTON

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August 30, 1983

MEMORANDUM FOR THE SECRETARY OF STATE
THE SECRETARY OF DEFENSE
THE SECRETARY OF COMMERCE
THE SECRETARY OF ENERGY
THE DIRECTOR OF CENTRAL INTELLIGENCE
THE CHAIRMAN, JOINT CHIEFS OF STAFF

SUBJECT: Implementation of Export Control Changes for China ~~(S)~~

On June 9, 1983, the President directed that the export control category for the People's Republic of China be changed from Category P to Category V, in accordance with our policy to treat China as a friendly, non-allied country. This change will not affect our obligations to the international coordinating committee. All items subject to multilateral review will continue to require referral to the COCOM. (S)

An interagency Steering Committee was established under the NSC Senior Director for Political-Military Affairs to establish a national security framework for technology transfer to the PRC. ~~(S)~~

An interagency group established liberalized guidelines for the review of export licenses for China. "Green Lines" were established for cases to be processed by the Department of Commerce without review by the Department of Defense for national security purposes. For major export categories, goods whose export would not threaten United States security interests or which do not significantly enhance China's unique capabilities in certain specified critical areas were included below this line. In addition, a "Red Line" was established for a few, narrowly proscribed areas where there would be a very strong presumption of denial for exports of sensitive goods and technologies. Advanced technical capabilities whose acquisition by China would threaten United States security interests were included in this area. ~~(S)~~

The Joint Chiefs of Staff identified six Critical Military Capabilities--Nuclear Weapons and Delivery System, Anti-Submarine Warfare, Intelligence Collection, Power Projection, Electronic Warfare, and Air Superiority. Noting that current Chinese capabilities in these areas are limited, and are likely to remain so through the 1990s, only a large-scale infusion of the most advanced Western technology to broad military modernization could significantly increase China's ability to threaten the United States or its interests and allies. Development of that type of military power would indicate a change in PRC intentions and would presage review of the overall relationship. ~~(S)~~

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The Joint Chiefs of Staff recommended against the transfer of: a) Basic production technologies at their most advanced stages that are related to commodities controlled for national security purposes; b) State-of-the-art, military-related technologies and weapons systems; and c) Sensitive military-related technologies that the United States shares only with its closest allies or maintains under vigorous unilateral control. The JCS also indicated that technologies of lesser capability are not likely to raise Chinese military capabilities to threatening levels. (S)

In accordance with these findings, United States policy should provide China with the technical capabilities to build a modern economy in order to strengthen China's technical and military capabilities in ways which do not threaten United States interests, including the security of United States allies in the region. United States export licensing practice should limit those exports to China that would make a key contribution to identifiable Chinese military programs in the six critical areas in such a manner as to threaten United States national security interests. (S)

Applications falling between the Red and Green lines should be disapproved if the transfer would provide a specific, new critical capability or significantly enhance existing performance in one or more of the six critical capabilities; if the extent of the risk to the United States and its ability to respond would be such as to threaten United States security interests to an extent that exceeds the level of manageable risk as defined in the JCS study; if China in fact has the ability to effectively integrate the technology into advanced weapons sytems; if the national security risk is not offset by the national security benefits that could be derived from constraining Soviet military resources; and if effective safeguards against diversion to military end-uses cannot be devised. (S)

Export licensing to China should be reviewed twice annually to determine if the technical levels of licensing should be adjusted, consistent with United States security interests. Continuing effort should be devoted to the establishment of Green lists for other product categories from the commodity control list. The Steering Committee should meet at least quarterly to review the licensing process, to evaluate expansion of either the Green or Red list, to consider other steps to improve the licensing process, and to ensure that broader policy considerations are taken into account. (S)

FOR THE PRESIDENT:

William P. Clark