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U.S. Dual-Use Export Controls for China Need to Be Strengthened

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UNITED STATES DEPARTMENT OF COMMERCE
The Inspector General
Washington, D.C. 20230

March 30, 2006

MEMORANDUM FOR: David H. McCormick
Under Secretary for Industry and Security

FROM: Johnnie E. Frazier

SUBJECT: Final Report: *U.S. Dual-Use Export Controls for China Need to be Strengthened* (IPE-17500)

As a follow-up to our March 9, 2006, draft report, attached is our final report on dual-use export controls for China, the seventh report required by the National Defense Authorization Act for Fiscal Year 2000, as amended. As you know, the act mandates that we issue a report to the Congress on the policies and procedures of the U.S. government with respect to the export of technologies and technical information to countries and entities of concern by March 30 of each year through 2007. This year's report focuses on U.S. export controls for the People's Republic of China (China).

While our review found that coordination between the various federal export licensing agencies was adequate during the dispute resolution process for export license applications involving China, we identified a number of areas of concern related to U.S.-China export control activities. We offer a number of specific recommendations on page 42 that we believe will help strengthen these activities, if implemented. This report contains two classified appendices that have been provided under separate cover. Appendix C discusses end-use checks in China and is classified CONFIDENTIAL. Appendix D is classified SECRET/NOFORN and highlights concerns with the sharing and utilization of intelligence information within BIS' Export Enforcement.

We are pleased to note that BIS, in its written response to our draft report, indicated that it has already taken or plans to take action on our recommendations. We request that you provide us with an action plan addressing the status of the recommendations in our report within 60 calendar days.

We thank you and other members of the BIS staff for your assistance and courtesies extended to us during our review. If you would like to discuss this report or the requested action plan, please call me at (202) 482-4661 or Jill Gross, Assistant Inspector General for Inspections and Program Evaluations, at (202) 482-2754.

Attachment

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EXECUTIVE SUMMARY

The Inspectors General of the Departments of Commerce, Defense, Energy, and State, in consultation with the Director of Central Intelligence and the Director of the Federal Bureau of Investigation, are required by the National Defense Authorization Act (NDAA) for Fiscal Year 2000 to conduct an eight-year assessment of the adequacy of current export controls and counterintelligence measures to prevent the acquisition of sensitive U.S. technology and technical information by countries and entities of concern. The NDAA mandates that the Inspectors General report to the Congress no later than March 30 of each year, until 2007.

The United States controls the export of sensitive goods and technologies for national security, foreign policy, and nonproliferation reasons under the authority of several different laws. The primary legislative authority is the Export Administration Act of 1979.[1] Under the Act, the Commerce Department's Bureau of Industry and Security (BIS) administers the Export Administration Regulations (EAR) by developing export control policies, issuing export licenses, and enforcing the laws and regulations for dual-use exports.

Serious concerns exist over the People's Republic of China's (China's) weapons of mass destruction proliferation record, the adequacy of its export control policies, and its efforts to obtain sensitive technologies to advance its military capabilities. A critical question is the U.S. government's capacity to implement effective controls over U.S. exports to China. In addition, while current U.S. policy[2] supports the Hong Kong Special Administrative Region's (Hong Kong) high degree of autonomy established under the Joint Declaration signed by the United Kingdom and China in 1984 and the Basic Law promulgated by China in 1990, the U.S. government has been tasked with monitoring Hong Kong's ability to maintain an effective and transparent export control regime.

Between FYs 2001 and 2005, the number of China export license applications received by BIS increased approximately 31 percent. Of the 17,129 total export license applications received by BIS in FY 2005, 1,772 (approximately 10 percent) were for exports to China. Some U.S. high technology industries cite export controls as significant barriers to (1) reducing the $193.9 billion U.S. trade deficit with China in FY 2005 and (2) increasing legitimate U.S. exports to China, which totaled $38.9 billion. That same fiscal year, the value of approved exports to China requiring export licenses totaled $2.4 billion (approximately 6.2 percent of total U.S. exports to China), while the value of denied export licenses equaled $12.5 million (less than 1 percent). The value of applications returned without action totaled $587.4 million.[3]

To satisfy the FY 2006 NDAA reporting requirement, the Inspectors General from the Departments of Commerce, Defense, Energy, Homeland Security, and State, and the Central

[1] Although the act last expired on August 21, 2001, the President extended existing export regulations under Executive Order 13222, dated August 17, 2001, invoking emergency authority under the International Emergency Economic Powers Act.
[2] The United States-Hong Kong Policy Act of 1992, as amended, establishes the authority of the U.S. government to treat Hong Kong as a non-sovereign entity distinct from China for the purposes of U.S. domestic law based on the principles of the 1984 Sino-British Joint Declaration.
[3] It should also be noted that the existence of U.S. export control regulations towards China might have a discouraging effect on potential U.S. exports to China that may lead U.S. companies to not apply for export licenses.

Intelligence Agency agreed to conduct a review of U.S. export controls for China.[4] Within Commerce, we sought to evaluate (1) the consistency of BIS' export control policies, practices, and procedures regarding China with relevant laws and regulations; (2) the effectiveness of coordination among federal agencies during the dispute resolution process for export license applications involving China; (3) the potential for diversion of sensitive commodities from Hong Kong to China; (4) the effectiveness of BIS' end-use check program in China and Hong Kong; and (5) what activities Commerce bureaus are engaged in pursuant to the 1979 U.S. and China Science and Technology Agreement and, to the extent practicable, whether they are adhering to export control regulations.[5]

While our review found that the coordination between the various federal export licensing agencies was adequate during the dispute resolution process for export license applications involving China, we identified a number of areas of concern related to U.S.-China export control activities. Our specific observations are as follows:

Export Control Regulations and Policies Related to China Should Be Strengthened. There is no regulatory basis to deny an export license application solely on the basis of military end use if the item is not controlled for "national security" reasons. As a result, military end users in China may be receiving sensitive U.S. commodities that can be used in the development of conventional weapons. During the course of our review, we identified two China export license applications that the U.S. government was unable to deny despite significant concerns over the risk of diversion to unauthorized end users or end uses.

In addition, we found that BIS' public statements about its export control policy for China are inconsistent with the EAR. Specifically, while the EAR states, "[i]tems may be approved even though they may contribute to Chinese military development or the end-user or end-use is military," BIS officials have repeatedly stated that BIS does not approve export licenses to military end users in China. This inconsistency results in a lack of transparency to exporters and may cause difficulties in implementation and application of export controls within the interagency export licensing community (see page 17).

BIS' End-Use Check Programs in China and Hong Kong Need to Be Improved. End-use checks, an important part of the license review and enforcement process, verify the legitimacy of dual-use export transactions controlled by BIS. A pre-license check (PLC) is used to validate information on export license applications by determining if an overseas person or firm is a suitable party to a transaction involving controlled U.S.-origin goods or technical data. Post shipment verifications (PSVs) strengthen assurances that exporters, shippers, consignees, and

[4] Although not mandated by the NDAA for FY 2000, the Department of Homeland Security Office of Inspector General participated in this year's review.

[5] The NDAA for FY 2003 [Public Law 106-398, Section 1207(d)(2)(F)] requires the Commerce Office of Inspector General to assess the extent to which programs and activities conducted under the *Agreement Between the Government of the United States of America and the Government of the People's Republic of China on Cooperation in Science and Technology,* signed in Washington, DC on January 31, 1979, as amended and extended (hereafter referred to as the S&T Agreement) are carried out in compliance with export control laws and regulations, especially those governing deemed exports. The term "deemed export" derives from Section 734.2(b)(2)(ii) of the EAR, which states "any release of technology or source code subject to the EAR to a foreign national… is deemed to be an export to the home country or countries of the foreign national."

end users comply with the terms of export licenses, by determining whether goods exported from the U.S. were actually received by the party named on the license and are being used in accordance with the license provisions. BIS Export Control Officers (ECOs) conduct end-use checks in China and Hong Kong.

While the reluctance of the Chinese government to allow requested end-use checks has often precluded the U. S. government from performing many checks, agreement to the *End Use Visit Understanding* (EUVU) by both countries in April 2004 afforded BIS the ability to conduct end-use checks on a wider spectrum of licensed goods and technologies in China. Nonetheless, the Chinese government has periodically slowed end-use visit cooperation since agreement to the EUVU. In addition, a number of the terms for conducting end-use checks outlined in the agreement are somewhat restrictive. Furthermore, we found that neither PLCs nor PSVs were being performed within prescribed time limits. We present our specific concerns on this issue in a classified appendix to this report (see Appendix C, classified CONFIDENTIAL).

Based on our review of BIS' Hong Kong end-use check program, we determined that BIS is not aggressively enough monitoring potential diversions of export-controlled items from Hong Kong to China. Specifically, BIS' policy at the time of our review sought to have at least two PSVs a week once the ECO arrived at post in March 2004. However, there were only 68 end-use checks (including 50 PLCs and 18 PSVs) conducted in FY 2005. We learned that BIS recently decreased the number of end-use checks required in Hong Kong from a minimum of 104 to 50 in FY 2006. Given the relative ease of conducting end-use checks in Hong Kong compared to China (due the size of the territory and the lack of host government restrictions on conducting such checks), it seems reasonable that more end-use checks can be done.

In addition, BIS was not adequately targeting PSVs for shipments that can be exported to Hong Kong without a license but would require a license to China. Specifically, BIS initiated seven PSVs involving such transactions. However, four shipments were covered by a license exception and were eligible for re-export from Hong Kong to China without a license. As a result, these particular PSVs were an inefficient use of ECO resources. We identified two main reasons for the poor targeting of "no license required" shipments to Hong Kong, including (1) inadequate upfront research by the Office of Enforcement Analysis (OEA) and (2) inadequate intelligence sharing between the Office of Export Enforcement and OEA.

Finally, we noted that BIS does not have a formal staffing plan in place to help ensure continuity in its assignments of ECOs in Hong Kong and China. Specifically, there is currently no pool of talent within BIS (e.g., a law enforcement agent with Mandarin Chinese language skills) from which to draw replacement ECOs. Moreover, the ECO in Hong Kong is scheduled to depart post in May 2006 (after recently extending his assignment) and the term of the current ECO in China expires in December 2006. BIS recently informed us that it has selected a candidate for the Hong Kong position, but he is not expected to arrive at post until July 2006 since he will have to obtain basic law enforcement training (see page 23).

BIS' Efforts to Ensure Compliance with License Conditions Could Be Enhanced. The ability to place conditions on a license is an important part of the license resolution process, as well as an additional mechanism to monitor certain shipments. Of the 55 standard license

conditions, six require the licensee to submit export documentation to BIS regarding the shipment of a controlled commodity. A seventh condition, referred to as "Write Your Own" (WYO), allows licensing officers to formulate unique requirements, which may also include reporting requirements. Export Administration is responsible for monitoring five of these conditions (including the WYO condition), and Export Enforcement the remaining two.

While BIS has a process to track whether or not exporters actually submit documentation pursuant to six of the seven license reporting conditions[6] provided the licenses are properly marked, it does not require licensing officers to actually review the documentation. As a result, we identified 11 China cases that required exporters to submit technical documentation pursuant to conditions uniquely formulated by the interagency licensing agencies that did not receive a technical review. Without a substantive, technical review of the documentation, BIS cannot determine whether the exporter (and/or end user) is complying with the intent of the license conditions.

In addition, we identified five China licenses that required a PSV but were not properly marked by the licensing officer with "Condition 14."[7] Instead the text of the PSV condition was recorded in the WYO condition despite a countersigning process meant to ensure that licenses applications are processed appropriately, including making sure that license conditions are accurately reflected on the license applications. As such, these licenses were not entered into Export Enforcement's tracking system, which is monitored by OEA. While the exporters submitted the required shipping documentation to BIS for three of the five licenses,[8] this information was not forwarded to OEA. Because of the time that elapsed between the date of shipment and OEA's actual receipt of the shipping documents after our inquiry, OEA was not able to initiate the PSV request per the terms of the April 2004 *End Use Visit Understanding*. As a result, BIS cannot determine whether the goods involved in these cases were diverted to unauthorized end users or end uses (see page 32).

NIST and NOAA Conduct Various Activities Pursuant to the 1979 Agreement with China on Science and Technology. In 1979, the governments of the United States and China entered into an agreement to promote cooperation in the field of science and technology. Under this agreement, individual U.S. government agencies may engage their Chinese counterparts in activities to promote the exchange of information and expertise in specific areas of science and technology. The Commerce Department's National Institute of Standards and Technology (NIST) and the National Oceanic and Atmospheric Administration (NOAA) both maintain active protocols under the agreement.[9]

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[6] Licenses requiring exporters to submit post shipment reports on high-performance computer exports to certain countries are monitored separately from Export Enforcement's Conditions Follow-up Subsystem.
[7] When a licensing officer marks "Condition 14" on a license application, the license is automatically entered into Export Enforcement's Conditions Followup Subsystem and targeted for subsequent monitoring. Exporters are required to submit copies of Shipper's Export Declarations to OEA following the initial shipment, which then initiates a PSV.
[8] According to BIS, shipments had not yet been made against the remaining two licenses as of January 17, 2006.
[9] According to the Department of State, a total of six Cabinet-level Departments and four independent federal agencies maintained active protocols under this agreement as of April 2005.

Overall, we found that NIST appears to be complying with export control regulations with respect to activities undertaken pursuant to the 1979 S&T Agreement. Specifically, we inspected 12 of the 129 EAR-controlled items at the Gaithersburg, Maryland campus to determine whether Chinese national visitors could have access to the controlled technologies. We found that although long-term Chinese foreign national visitors were not always vetted for security purposes prior to gaining access to some rooms or laboratories that contained EAR-controlled items, those items were locally secured such that they were restricted from access. In addition, NIST reported that all short-term Chinese foreign national visitors are escorted by NIST personnel at all times and are not allowed to access EAR-controlled technology. Further, NIST has instituted a program to conduct an "upfront" review of its research activities to determine whether technology used and/or created by NIST researchers and their staff (including foreign guest researchers) is subject to U.S. export control laws.

During the course of our fieldwork at NOAA, we found that it was in the process of conducting an inventory of EAR-controlled items at its facilities where foreign nationals (including some Chinese foreign nationals) were present or that contained critical infrastructure. NOAA completed its initial inventories of EAR-controlled technology at these facilities in December 2005 and made a preliminary determination that no deemed export licenses were required. According to NOAA, on February 16, 2006, BIS provided favorable feedback regarding NOAA's inventories and assessment, including NOAA's conclusion that there are no instances where deemed export licenses are needed for any foreign nationals working in NOAA facilities. In addition, NOAA presentations and publications developed under science and technology activities appeared to contain publicly available information and, therefore, would not be subject to dual-use export controls. Finally, Commerce's Office of Security informed us that no Chinese foreign national visitor or guest researcher is given unescorted access into NOAA facilities until after the completion and adjudication of a background investigation. While it appears that Chinese foreign nationals did not have access to EAR-controlled technology, we did not verify the controls in place limiting foreign national access (see page 36).

We also found that employees from both NIST and NOAA who traveled to China [redacted] We present our findings on this issue in a separate memorandum report, [redacted] scheduled to be issued in March 2006.

This report contains two appendices that contain classified information. Appendix C, as noted above, discusses end-use checks in China and is classified CONFIDENTIAL. Appendix D is classified SECRET/NOFORN and highlights concerns with the sharing of intelligence information between Export Enforcement's Office of Export Enforcement and its Office of Enforcement Analysis that could be helpful in targeting end-use checks in Hong Kong.

[redacted]

On page 42, we list a summary of the recommendations we are making to address our concerns.

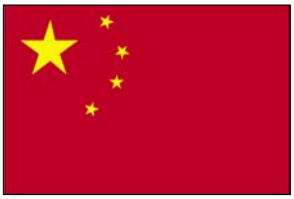
In its March 23, 2006, written response to our draft report, the Under Secretary for Industry and Security stated that BIS had taken or is in the process of taking steps to meet the report's recommendations. In addition, NOAA's written response to our draft report stated that it agrees with our overall findings and recognizes the continued need to heighten awareness within its research community to ensure compliance with the *Export Administration Regulations*. Where appropriate, we have made changes to the report and recommendations in response to both formal and informal comments from the two agencies. We discuss pertinent aspects of their responses in appropriate sections of the report. The complete responses from BIS and NOAA are included as appendixes to this report

BACKGROUND

The United States controls the export of dual-use items for national security, foreign policy, and nonproliferation reasons under the authority of several different laws. Dual-use items are goods and technologies determined to have both civilian and military uses. The primary legislative authority for controlling the export of dual-use commodities is the Export Administration Act (EAA) of 1979, as amended.[12]

Under the Act, the Department of Commerce's Bureau of Industry and Security (BIS) administers the Export Administration Regulations (EAR) by developing export control policies, issuing export licenses, and enforcing the laws and regulations for dual-use exports. In FY 2005, BIS had 361 full-time equivalent staff members and an appropriation of approximately $67.5 million. Its two operating units principally responsible for export controls are Export Administration and Export Enforcement.

U.S.-China Relations and Dual-Use Export Control Concerns



China is a communist state with the world's largest population (approximately 1.3 billion) and one of the world's fastest growing economies. In the last 14 years, its economy has grown at an average rate of 10 percent; its gross domestic product (GDP) grew 9.5 percent in 2004 and the World Bank projected GDP growth of 9.3 percent in 2005. China has become the world's third largest trading nation behind the United States and Germany, and is an important trading partner of the United States. U.S. exports to China totaled $38.9 billion in FY 2005, making it the fifth largest export market for U.S. exports. However, Chinese imports to the United States in FY 2005 exceeded $232.9 billion.[13] The United States is also a significant investor in China, with its investment there growing from $2 billion in 1995 to $15 billion in 2004.[14]

China's export control system has been criticized in the past by many western nations for its insufficiency in controlling the exports of sensitive technologies and weapons to nations of global and regional security concerns. However, China has been trying to improve certain aspects of its export control system. For example, China is a signatory of the Nonproliferation Treaty, the Chemical Weapons Convention, the Biological Weapons Convention, and the Comprehensive Test Ban Treaty. Further, China became a member of the Nuclear Suppliers Group, a multilateral control regime for nuclear technologies, in 2004.[15]

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[12] Export Administration Act of 1979, as amended, sec. 3; 50 U.S.C app. sec. 2402(2). Although the Act expired on August 20, 2001, the Congress agreed to the President's request to extend existing export regulations under Executive Order 13222, dated August 17, 2001, thereby invoking emergency authority under the International Emergency Economic Powers Act.

[13] U.S. Census Bureau, Trade in Goods (Imports, Exports and Trade Balance) with China, available at www.census.gov/foreign-trade/balance/c5700.html, accessed January 18, 2006.

[14] U.S. Government Accountability Office. *China Trade: U.S. Exports, Investment, Affiliate Sales Rising, but Export Share Falling*, GAO-06-162, December 2005.

[15] China has submitted its application to join the Missile Technology Control Regime, but member states have been

China's Military Modernization Strategy and Acquisition of Foreign Technologies

Public statements by the Chinese government and a recent study by the U.S. Department of Defense support the understanding that China seeks to modernize its military through an aggressive program of domestic industrial reform and acquisition of key weapons and technologies from foreign sources that it currently lacks domestically.[16] Specifically, China's so-called "grand strategy" employs three main components: (1) "selective modernization" of its existing strengths in electronics and missile-related technologies to further develop its capabilities in command, control, communications, computers, intelligence, surveillance and reconnaissance (commonly referred to as C4ISR), and precision-strike weapons; (2) "civil-military integration" aimed at reforming China's defense industries; and (3) acquisition of advanced foreign technologies that can be used to enhance its military capabilities.[17]

Some Technologies Sought by China

- Information Technology
- Microelectronics
- Nanotechnology
- Space Systems
- Innovative Materials
- Propulsion Systems
- Missile Systems
- Computer-aided Manufacturing and Design

Source: U.S. Department of Defense

To achieve its military modernization plan, the Chinese government has employed its "Three-Ways Policy," which entails: (1) importation of foreign technologies, (2) joint development with foreign entities, and (3) domestic research and development.[18] As indicated in the Chinese government's outline for the *Tenth Five-Year Plan for National Economic and Social Development (2001-2005*), China still continues to seek a number of high technologies (see box above).[19]

U.S. Dual-Use Export Control Policies and Practice Toward China

The U.S. government's continuing concerns over China's human rights violations and the threat of proliferation of weapons of mass destruction have resulted in the maintenance of economic sanctions towards China even as U.S.-China economic relations continue to deepen. One of the prime sources of U.S. export controls toward China today are the Tiananmen Square sanctions,[20] which were enacted following the Chinese government's response to the demonstrations at

resisting China's admittance. In addition, China has begun participating in plenary sessions of the Wassenaar Arrangement—a multilateral control regime for conventional weapons and related dual-use technologies—at the urging of the United States, but is not a member.

[16] U.S. Department of Defense, Office of the Secretary, *The Military Power of the People's Republic of China*. Washington, DC: U.S. Department of Defense, 2005; Keith Crane, Roger Cliff, Evan Medeiros, James Mulvenon, and William Overholt, *Modernizing China's Military: Opportunities and Constraints*, MG-260. Santa Monica, CA: RAND Corporation, 2005.

[17] Keith Crane, *et al*, 154-157.

[18] U.S. Department of Defense Office of the Secretary, 23.

[19] Ibid.

[20] Section 902 of the Foreign Relations Authorization Act, FYs 1990 and 1991 (P.L. 101-246; 22 U.S.C. 2151 note).

Tiananmen Square in 1989. Some of the most pertinent sections include: (1) the prohibition of U.S. arms exports to China, (2) restrictions on certain U.S. exports of dual-use items (e.g., items controlled for crime control and regional stability), and (3) U.S. export and licensing restrictions on Chinese entities of concern that have been found to have engaged in proliferation of missiles and/or weapons of mass destruction.[21]

Further, the United States controls dual-use exports to China for reasons of national security, chemical and biological weapons proliferation, nuclear proliferation, missile technology, regional stability, and crime control. These controls are primarily derived from international multilateral export control regimes, and the lists of items controlled are mutually agreed upon between participating states. According to BIS, it generally practices a policy of denial for exports of dual-use items to Chinese military end users and other entities that have significant ties to the military.

Industry Concerns Over U.S. Dual-Use Export Controls for China

Despite recent increases in U.S. exports to China, the U.S. business community continues to have concerns about the U.S. government's dual-use export control policies toward China and their perceived impact. Some U.S. high technology industries cite export controls as significant barriers to reducing the $193.9 billion U.S. trade deficit with China in FY 2005 and increasing legitimate U.S. exports to China, which totaled $38.9 billion. That same fiscal year, the value of approved exports to China requiring export licenses totaled $2.4 billion (approximately 6.2 percent of total U.S. exports to China), while the value of denied export licenses equaled $12.5 million (less than 1 percent).[22] Applications returned without action totaled $587.4 million.

Nevertheless, it should be noted that certain sectors within the U.S. high-technology industry are impacted significantly more by dual-use export controls than others, as many companies in those sectors tend to develop and market specialized technologies and products that may be deemed sensitive for national security reasons and, thus, more strictly controlled. Further, the existence of U.S. export control regulations towards China can have a discouraging effect on potential U.S. exports to China that may lead to self-imposed restrictions by U.S. companies in order to avoid potentially lengthy license application processing times and license denials.

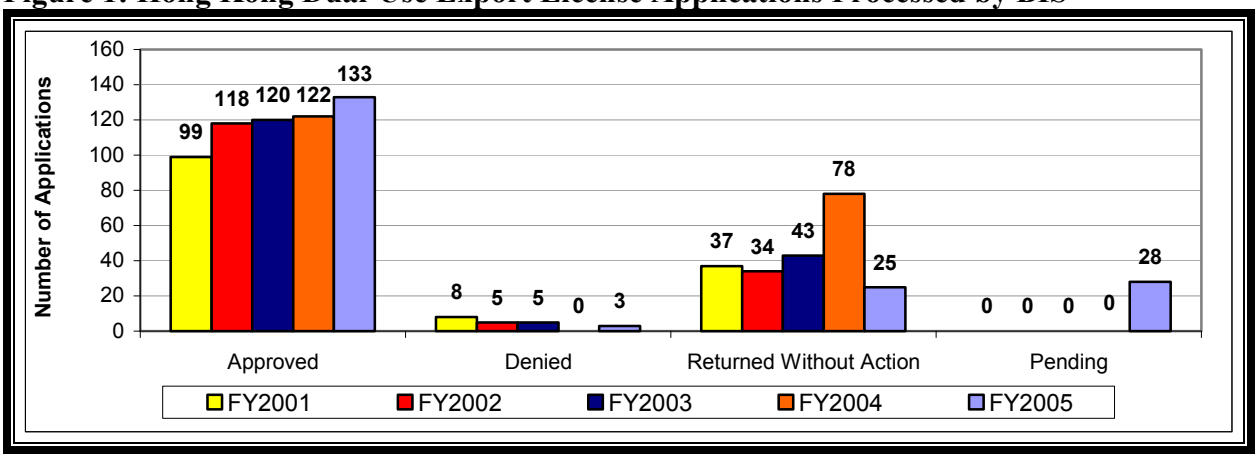
U.S. Export Control Policies and Practice Toward Hong Kong

China and the United Kingdom agreed to the terms of Hong Kong's reversion from the United Kingdom back to China in their 1984 Joint Declaration. The declaration calls for Hong Kong to be a Special Administrative Region of China that "will enjoy a high degree of autonomy" except in the conduct of defense and foreign affairs. Under the "one country, two systems" formulation, Hong Kong is to remain a separate customs territory and retain its status as a free port for 50 years.

[21] Congressional Research Service, *China: Economic Sanctions*. Washington, DC: CRS, May 18, 2005: 1-2.
[22] Approval of a license does not necessarily mean that the export will occur within the same fiscal year or at all because licenses are valid for two years and many are not acted upon by the exporter for various reasons.

The United States-Hong Kong Policy Act of 1992 calls upon the U.S. government to continue to treat Hong Kong as a separate territory with respect to economic and trade matters and to support Hong Kong's continued access to sensitive technologies so long as such technologies are protected. Therefore, the current U.S. export control policy toward Hong Kong is less restrictive than that applied to China. Specifically, the U.S. government applies different licensing policies and standards to Hong Kong than it does to China, reportedly because of Hong Kong's ability to maintain an effective export control system and concerns over China's proliferation and military activities. Thus, Hong Kong receives preferential licensing treatment. For example, for many dual-use items (e.g., "composite structures" or laminates, certain types of ball bearings, and certain optical sensors), exporters do not need to submit license applications to obtain prior U.S. government approval for exports to Hong Kong, while those items would require a license for export to China. Further, approval is generally granted even when an export license to Hong Kong is required (see Figure 1).

Figure 1: Hong Kong Dual-Use Export License Applications Processed by BIS



Source: Export Administration, Bureau of Industry and Security

Dual-Use License Application Process for Exports to China

When BIS receives a license application, either manually or electronically, it is entered into the Export Control Automated Support System (ECASS).[23] ECASS screens all new applications to determine whether the listed parties (1) have registration numbers in ECASS or need numbers assigned and (2) raise concerns or "flags" that require the application to be referred to the Office of Export Enforcement (OEE).[24] Applications flagged by the system are simultaneously referred to OEE and the licensing officers (LOs) in Export Administration. Unflagged applications are referred only to the LOs for processing.

[23] ECASS is an unclassified system that processes and stores dual-use export licensing information for BIS.
[24] Generally, applications referred to OEE are those involving parties on BIS' watchlist, which lists parties identified as warranting increased scrutiny for export license purposes. OEE agents may also put flags on certain parties that they are interested in seeing, such as parties involved in an ongoing investigation.

According to Executive Order 12981,[25] BIS has nine days to conduct its initial review. During this review, the LO first verifies the export control classification number (ECCN) the applicant obtained from the Commerce Control List (CCL). The CCL lists commodities, software, and technology subject to the export licensing authority of BIS. Each ECCN contains a brief description of the item(s). Items that are subject to the EAR but not listed on the CCL are designated as "EAR99."[26]

After verifying the ECCN, the LO reviews the license requirements and license exceptions for that ECCN. The LO then (1) determines the reasonableness of the end use specified by the exporter, (2) documents the licensing history of the exporter, (3) documents the licensing history of the ultimate consignee or end user(s), (4) documents the reason(s) for not referring a license application to the other agencies (if applicable), and (5) provides a written recommendation on whether to approve or deny the application. After the LO's review is completed, the application is referred to the Departments of Defense, Energy, and State unless those licensing referral agencies have delegated their decision-making authority to Commerce.[27]

In addition, as of November 2003, BIS requires its LOs to forward all China export license applications to the Central Intelligence Agency's Weapons Intelligence, Nonproliferation, and Arms Control Center (WINPAC) for an end-user review. It should be noted that both agencies are currently working on a new protocol outlining the specific procedures for WINPAC's export license review process, including China applications.

Under the Executive Order, the referral agencies must provide a recommendation to approve or deny the license application to the Secretary of Commerce within 30 days of receipt of the referral and all related required information. To deny an application, the referral agency is required to cite both the statutory and regulatory basis for denial, consistent with the provisions of the EAA and the EAR. An agency that fails to provide a recommendation within 30 days is deemed to agree with the decision of the Secretary of Commerce (see Appendix B for a flow chart depicting the licensing process).

Most export licenses for China are issued with conditions that require the exporter to abide by certain restrictions. The conditions are primarily used to control proliferation of the commodity by limiting the end-use or restricting access to the commodity to specific end users (see Chapter III for more discussion on license conditions).

Dispute Resolution Process for China Export License Applications

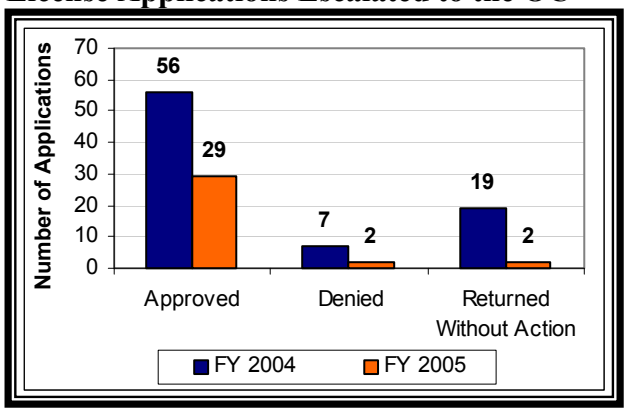
If there is disagreement on whether or not to approve a pending license application after the 30-day review period, the application is referred to a higher-level interagency working group called the Operating Committee (OC), which meets weekly. Under Executive Order 12981, the OC has

[25] Executive Order 12981, as amended—*Administration of Export Controls*, December 5, 1995.
[26] EAR99 essentially serves as a "basket" designation for items that are subject to the EAR but not listed on the CCL. EAR99 items can be shipped without a license to most destinations under most circumstances unless certain prohibitions apply (e.g., export to an embargoed destination). The majority of U.S. exports are EAR99 items.
[27] BIS refers licenses to the Department of Justice only when the item is controlled for reasons relating to the protection of encryption technologies.

representatives from the Departments of Commerce, Defense, Energy, and State. Non-voting members of the OC include appropriate representatives of the CIA and the Joint Chiefs of Staff. The Secretary of Commerce appoints the OC chairman who considers the recommendations of the referral agencies before making a decision. While the OC Chair has the authority to decide most cases at this level without having to reflect the recommendations of the majority of the participating agencies, we found that the OC Chair's decisions for China cases were generally based on interagency consensus.[28]

The number of China export license applications escalated to the OC dropped significantly between FYs 2004 and 2005 (see Figure 2 for a breakdown of the determinations for these licenses).

Figure 2: Determinations for China Export License Applications Escalated to the OC



Source: Bureau of Industry and Security

Within five days of the OC chair's decision, a licensing referral agency may appeal or escalate the decision to the Advisory Committee on Export Policy (ACEP). The ACEP meets monthly if there are applications to decide. It is chaired by the Commerce Assistant Secretary for Export Administration, and includes Assistant Secretary-level representatives from the Departments of Defense, Energy, and State. The ACEP also includes non-voting representatives from the CIA and the Joint Chiefs of Staff. The ACEP's decision is based on a majority vote. Of the 13 China export license applications escalated to the ACEP in FY 2004, 10 were approved and 3 were returned without action.[29] In FY 2005, only three China export license application were escalated to the ACEP, 2 were approved, and one was denied.

Within five days of an ACEP decision, any dissenting agency may appeal the majority decision to the Export Administration Review Board (EARB). The Secretary of Commerce chairs the EARB, and its members include the Secretaries of Defense, Energy, and State. The Chairman of the Joint Chiefs of Staff and the Director of Central Intelligence are non-voting members of the EARB. The EARB's decision is based on a majority vote. Finally, within five days of the EARB decision, any dissenting agency may make a final appeal to the President. No export license applications for China were escalated to the EARB in FYs 2004 or 2005.

[28] Executive Order 12981, as amended, provides one exception to this rule for " . . . license applications concerning commercial communication satellites and hot-section technologies for the development, production, and overhaul of commercial aircraft engines . . . " For these applications, the chair of the OC is to report the "majority vote decision of the OC" rather than his/her decision.

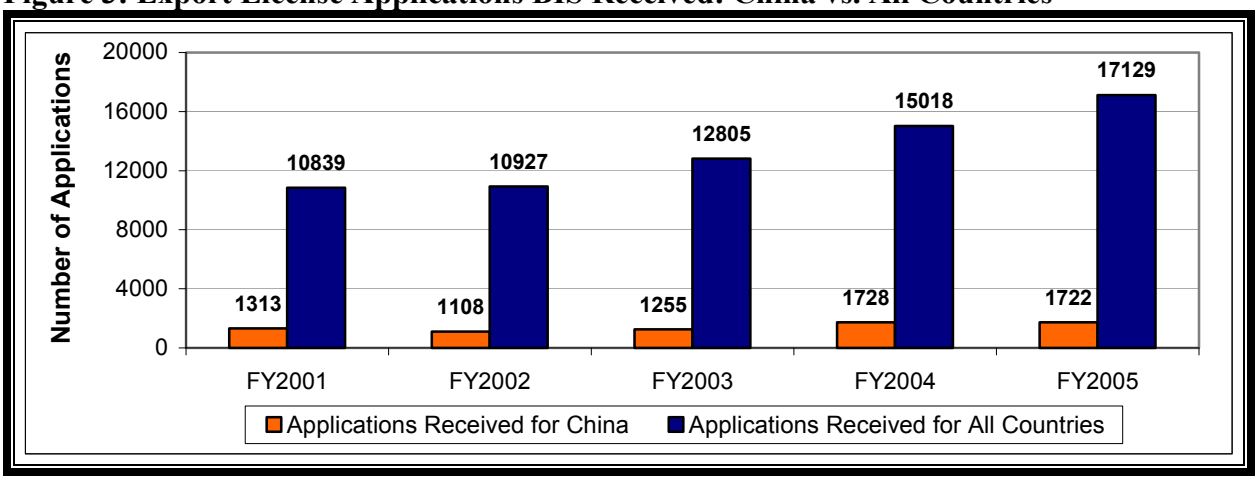
[29] According to the EAR, applications are typically "returned without action" by BIS for the following reasons: (1) the applicant has requested it, (2) a BIS export license is not required, (3) BIS has not received adequate information regarding the transaction, or (4) BIS is unable to contact the exporter to obtain additional information.

Overall, we found that the interagency escalation process for disputed export license applications allows officials from dissenting agencies a meaningful opportunity to seek additional review of such cases.

China Export License Application Trends

During FYs 2001 through 2005, the number of dual-use export license applications for China increased approximately 31 percent from 1,313 to 1,722. The total number of all export license applications (including deemed export license applications)[30] BIS received increased roughly 58 percent from 10,839 to 17,129 during the same period (see Figure 3).

Figure 3: Export License Applications BIS Received: China vs. All Countries

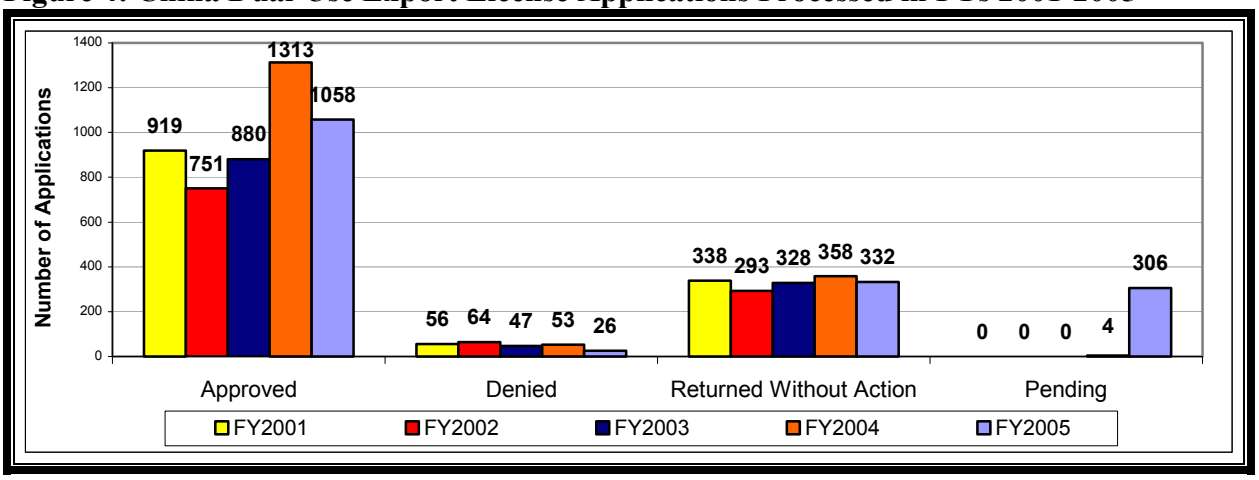


Source: Export Administration, Bureau of Industry and Security

Of the 17,129 export license applications BIS received during FY 2005, 1,722 (approximately 10.1 percent) were for exports to China. Of that number, 1,058 (approximately 61.4 percent) were approved, 26 (roughly 2.5 percent) were denied, and 332 (about 19.3 percent) were returned without action (see Figure 4 for a breakdown of BIS' determinations for these licenses).

[30] The total number of deemed export license applications for China has decreased over the past several years. Specifically, approximately 53 percent of all China export license applications was for deemed exports in FY 2001 compared to 18 percent in FY 2005.

Figure 4: China Dual-Use Export License Applications Processed in FYs 2001-2005[31]



Source: Export Administration, Bureau of Industry and Security

Trends in Technologies Sought by China Through Export Licensing Process

Most of the export license applications to China in FYs 2004 and 2005 involved technologies categorized under electronics, materials processing, computers, and telecommunications and information security (see Table 1 for a full listing of the number of export license applications BIS received for each CCL category). According to BIS, a significant part of these applications was for deemed exports.

Table 1: BIS License Applications for China by CCL Category, FYs 2004-2005

CCL Category	Description of Category	Applications* Received in FY2004	Applications* Received in FY2005
0	Nuclear Materials, Facilities, and Equipment	11	12
1	Materials, Chemicals, "Microorganisms," and Toxins	160	190
2	Materials Processing	503	520
3	Electronics	530	673
4	Computers	155	303
5	Telecommunications and Information Security	421	529
6	Lasers and Sensors	78	55
7	Navigation and Avionics	22	37
8	Marine	7	4
9	Propulsion Systems, Space Vehicles, and Related Equipment	13	32
EAR99	Classification used for items subject to the EAR but not on the CCL	97	139

***Note:** Because applications may contain a request to export more than one technology, the number of applications in this column does not equal the total number of China export applications BIS received during FYs 2004 and 2005.

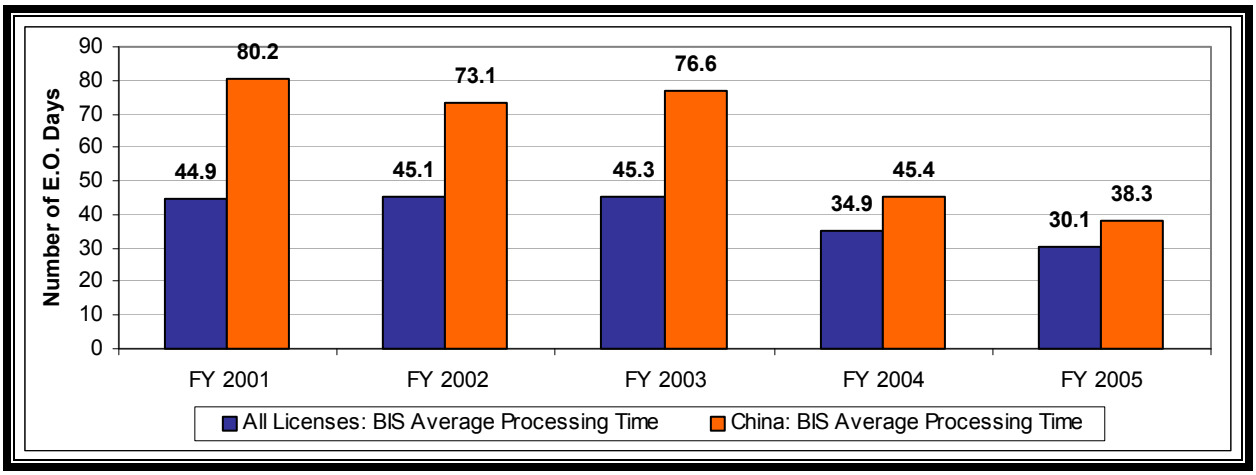
Source: Export Administration, Bureau of Industry and Security

[31] As of November 2005, 4 and 306 export license applications to China received by BIS in FY 2004 and FY 2005, respectively, remained *pending* and have not been *processed*. These include applications for deemed exports.

Export License Application Processing Times

According to BIS, average processing times for license applications involving China have fallen by almost 53 percent from 80.2 days in FY 2001 to 38.3 days in FY 2005 (see Figure 5 for BIS' average processing times in "Executive Order"[32] days for export license applications to China versus all countries).

Figure 5: BIS Average Processing Times in Executive Order Days: All Countries vs. China, FYs 2001-2005



Source: Export Administration, Bureau of Industry and Security

End-Use Checks in China and Hong Kong

End-use checks are an important part of the export licensing process that help determine whether the end users or intermediary consignees are suitable recipients of sensitive U.S. items and technology and would likely comply with applicable license conditions. End-use checks consist of pre-license checks (PLCs) and post shipment verifications (PSVs) and may be requested by any of the executive agencies involved in the interagency licensing process.[33] A PLC is conducted to establish the *bona fides* of a foreign entity involved in the export transaction while the license application is being reviewed. A PSV is conducted on a foreign entity after the license has been approved and the item has been shipped to help determine whether the licensed item(s) is being used in accordance with the license conditions.

End-use checks in China and Hong Kong are currently conducted by Export Control Officers (ECOs), one each based in Beijing and Hong Kong. ECOs are BIS export enforcement agents who hold the rank of commercial officer in the Commercial Section of U.S. embassies and

[32] Executive Order (EO) 12981 prescribes processing times and does not take into account the number of days an application is put on "hold without action". Thus, the term refers to the actual processing time in the license review and referral process, beginning with the day an export license application is received by BIS pursuant to the terms of Executive Order 12981.
[33] Pursuant to Executive Order 12981, these agencies are Commerce, Defense, Energy, and State.

consulates.[34] ECOs handle various in-country export control activities, including conducting end-use checks.

End-Use Check Trends in China

BIS end-use checks conducted in China have increased significantly since FY 2003 (see Figure 6). There are four main categories of end-use check results:

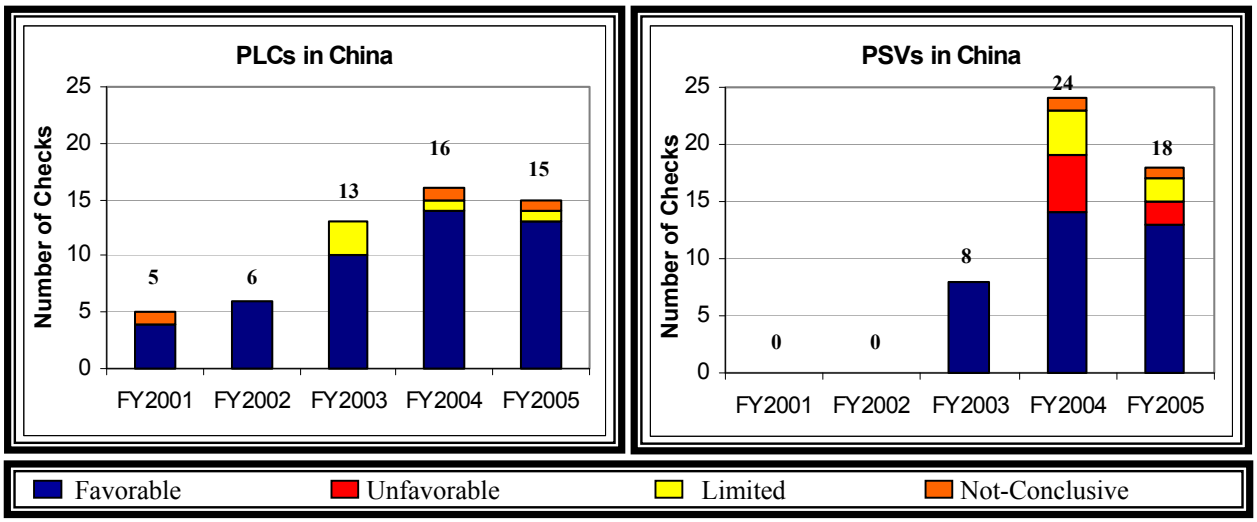
- **Favorable:** at the time the party of the transaction in question was visited, it appeared to be either a suitable recipient (for PLCs) or a reliable recipient (for PSVs) of the licensed commodities.

- **Unfavorable:** the subject of the transaction violated one or more license terms or conditions; or the subject refused to meet with the designated U.S. government personnel and allow the end-use check to be completed.

- **Limited:** the end-use check was conducted but was not completed consistent with all requirements stipulated in BIS' end-use check guidance. For a PSV, this could apply to situations where the bona fides of the end user and end use were verified, but certain license conditions were violated (e.g. intermediary was not supposed to take possession of the item but did).

- **Not-conclusive:** the end-use check was conducted but was not completed (e.g., a PSV was conducted but the stated end use could not be verified because the item was not in use yet).

Figure 6: PLCs and PSVs Conducted in China in FYs 2001-2005



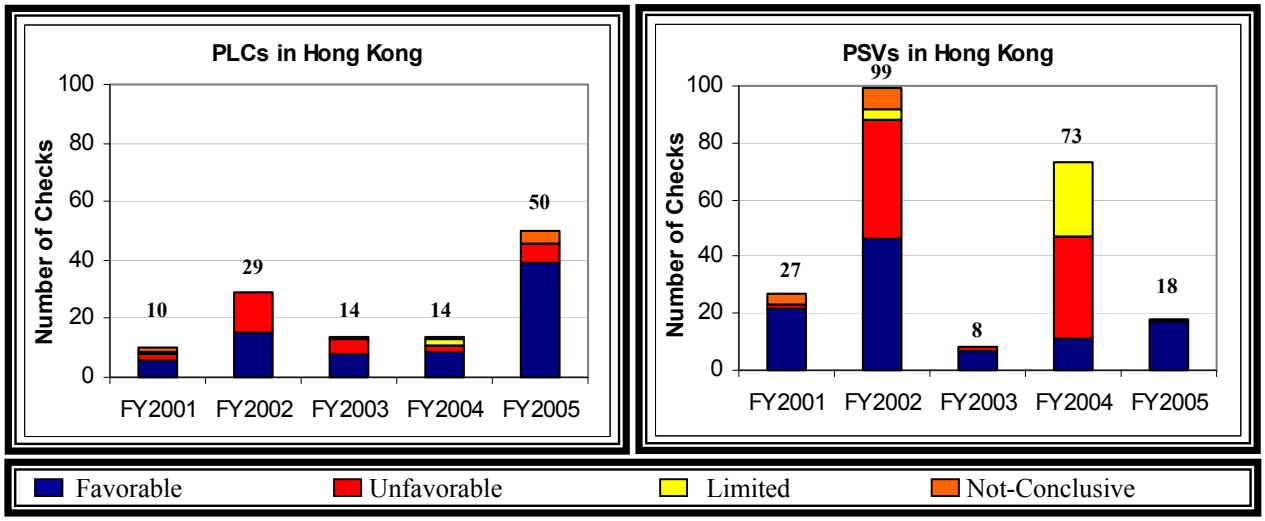
Source: Office of Enforcement Analysis, Bureau of Industry and Security

[34] BIS has additional ECOs stationed in Abu Dhabi, United Arab Emirates; Moscow, Russia; and New Delhi, India.

End-Use Check Trends in Hong Kong

End-use checks in Hong Kong were conducted by BIS' Sentinel teams[35] or Commercial Service officers at the U.S. consulate in Hong Kong until March 2004, when a BIS ECO was permanently stationed there. While the number of PLCs conducted in Hong Kong increased significantly in FY 2005, the number of PSVs conducted has decreased (see Figure 7).

Figure 7: PLCs and PSVs Conducted in Hong Kong, FYs 2001-2005



Source: Office of Enforcement Analysis, Bureau of Industry and Security

1979 U.S.-China Agreement on Cooperation in Science and Technology

On January 31, 1979, the governments of the United States and China entered into an agreement to promote cooperation in the field of science and technology (S&T Agreement).[36] Under the agreement, individual U.S. government agencies may sign protocols with their Chinese counterparts to promote exchange of information and expertise in specific areas of science and technology.[37] Cooperative activities under these protocols include (1) exchanges of information and data on technical developments and practices, (2) exchanges of scientists and engineers for training purposes, and (3) collaborative research and joint organization of symposia, seminars, and lectures.

[35] Sentinel teams, which are composed of domestic BIS special agents, are deployed to selected regions of the world to conduct end-use checks.

[36] The NDAA for FY 2003 [Public Law 106-398, Section 1207(d)(2)(F)] requires the Commerce Office of Inspector General to assess the extent to which programs and activities conducted under the *Agreement Between the Government of the United States of America and the Government of the People's Republic of China on Cooperation in Science and Technology,* signed in Washington, DC on January 31, 1979, as amended and extended are carried out in compliance with export control laws and regulations, especially those governing deemed exports. The term "deemed export" derives from Section 734.2(b)(2)(ii) of the EAR, which states "any release of technology or source code subject to the EAR to a foreign national… is deemed to be an export to the home country or countries of the foreign national."

[37] According to the Department of State, a total of six Cabinet-level Departments and four independent federal agencies maintained active protocols under this agreement as of April 2005.

The Commerce Department's National Institute of Standards and Technology (NIST) and National Oceanic and Atmospheric Administration (NOAA) maintain active protocols under the agreement. Specifically, during FYs 2004 and 2005, NIST had one active protocol covering metrology and standards.[38] During that same time period, NOAA had two protocols in effect, including one that covered atmospheric sciences and was managed by the National Weather Service (NWS). The other covered marine and fisheries sciences and was managed by the Office of Oceanic and Atmospheric Research (OAR).

[38] In September 2005, NIST entered into a second protocol covering chemistry, physics, materials, and engineering measurement sciences. However, this protocol was not active during the period of our review.

OBJECTIVES, SCOPE, AND METHODOLOGY

The Inspectors General of the Departments of Commerce, Defense, Energy, and State, in consultation with the Director of Central Intelligence and the Director of the Federal Bureau of Investigation, are required by the National Defense Authorization Act (NDAA) for Fiscal Year 2000, to conduct eight annual assessments of the adequacy of current export controls and counterintelligence measures to protect against the acquisition of sensitive U.S. technology and technical information by countries and entities of concern. This is the seventh review under the NDAA requirement.

To comply with the NDAA's FY 2006 requirement, the Offices of Inspector General[39] (OIG) agreed to assess the effectiveness of the U.S. government's export control policies and practices with respect to preventing the unauthorized transfer of sensitive U.S. technologies and technical information to China. Although current U.S. export control policy treats Hong Kong as a non-sovereign entity distinct from China with less restrictive controls on licensed commodities, our review also focused on the risk of diversion of export-controlled commodities from Hong Kong to China.

Within Commerce, our objectives were to evaluate (1) the consistency of BIS' export control policies, practices, and procedures regarding China with relevant laws and regulations; (2) the effectiveness of coordination between the various federal licensing agencies during the dispute resolution process for export license applications involving China; (3) the potential for diversion of sensitive commodities from Hong Kong to China; (4) the effectiveness of BIS' end-use check program in China and Hong Kong; and (5) what activities Commerce bureaus are engaged in pursuant to the 1979 U.S.-China Science & Technology Agreement and, to the extent practicable, whether they are adhering to export control regulations.

We conducted our evaluation from May 2005 through January 2006, under the authority of the Inspector General Act of 1978, as amended. This evaluation also was carried out in accordance with the *Quality Standards for Inspections* issued by the President's Council on Integrity and Efficiency in 2005. At the end of our review, we discussed our findings and conclusions with BIS' Under Secretary, Deputy Under Secretary, and other senior BIS officials. We also briefed other key Commerce officials from the National Institute of Standards and Technology, the National Oceanic and Atmospheric Administration, and the Office of the Secretary.

[39] This year's review also included the participation of the Department of Homeland Security's OIG.

Review of Export Controls Related to China and Hong Kong

Our methodology included the following activities:

U.S. Interviews. Within BIS, we spoke with the Deputy Under Secretary, Assistant Secretary and the Deputy Assistant Secretary for Export Administration, and the Deputy Assistant Secretary for Export Enforcement. Within Export Administration, we met with the Director of the Office of Exporter Services (OExS), the Directors of the Offices of Nonproliferation and Treaty Compliance and of Strategic Trade and Foreign Policy Controls, as well as staff from each office. Within Export Enforcement, we met with the Director of the Office of Export Enforcement, the Director of the Office of Enforcement Analysis (OEA), and their staff. We also met with both the current and a former chairperson of the Operating Committee and staff, as well as staff from BIS' Office of Chief Counsel. Within the International Trade Administration, we spoke with officials from the Commercial Service (CS), Market Access and Compliance, and Manufacturing and Services.

We also spoke with officials from federal agencies directly involved with or knowledgeable about U.S. dual-use export control policies and procedures related to China. Within the Central Intelligence Agency, we spoke with analysts from the Center for Weapons Intelligence, Nonproliferation, and Arms Control and the Office of Asian, Pacific, Latin American, and African Analysis. Within the Department of Defense, we spoke with officials from the Defense Technology Security Administration, the Air Force's Office of Special Investigations, the Naval Criminal Investigative Service, and the Counterintelligence Field Activity. Within the State Department, we interviewed staff from the Bureaus of East Asian and Pacific Affairs; Intelligence and Research; Nonproliferation; Oceans and International Environmental Scientific Affairs; and Political-Military Affairs.

In order to better understand the views of industry on U.S. export controls for China prior to our overseas visit, we met with several domestic U.S. industry associations, including the American Chamber of Commerce, the National Association of Manufacturers, and the U.S.-China Business Council. We also attended several meetings of BIS' technical advisory committees, specifically those dealing with information systems, materials processing and equipment, regulations and procedures, and sensors and instrumentation. We also met with officials from the Hong Kong Economic Trade Office in Washington, D.C.

Overseas Fieldwork. As part of our review, we traveled to Hong Kong and China to assess U.S. dual-use export control operations. We interviewed officials at the U.S. Consulate in Hong Kong, and the U.S. Embassy in Beijing, China. In Hong Kong, we met with the ECO and accompanied him on three end-use visits to Hong Kong entities. We also spoke with the CS Hong Kong's Senior Commercial Officer and Deputy Senior Commercial Officer. In addition, we met with the U.S. Consul General, the Deputy Principal Officer and the heads of the consulate's consular, economic, and political sections. Finally, we met with officials from the Department of Defense, Homeland Security's Immigration and Customs Enforcement (ICE), the Federal Bureau of Investigation's Legal Attaché, and other relevant U.S. agencies in Hong Kong.

While in Hong Kong, we also met with host government representatives from the Trade & Industry Department and the Customs & Excise Department. As part of these meetings, we visited the Lok Ma Chau Border Control Point between Hong Kong and Shenzhen, China, to observe Hong Kong's customs operations where we received a presentation and tour by the Control Points Command Chief Superintendent and his officers. We also met with a representative of the Hong Kong Trade Development Council to learn about this organization's efforts to promote export control compliance among Hong Kong companies.

Lok Ma Chau Border Control Point: Cargo traffic crossing from Hong Kong into Shenzhen, China

In China, we met with the ECO and accompanied her and officials from the Chinese Ministry of Commerce (MOFCOM) on a visit to a Chinese company in Guangzhou that was the subject of a prior end-use check in June 2005. We also met with CS' Senior Commercial Officer, the Deputy Senior Commercial Officer, the Commercial Representative who handled end-use visits for three months in FY 2005, and the Commercial Specialist who currently assists the ECO in her duties. Within the embassy, we spoke with the Deputy Chief of Mission and the heads of the U.S. embassy's consular; defense; economic; environment, science, technology, and health; and political sections. We also met with Homeland Security's ICE Attaché and other relevant U.S. government officials. In addition, the Inspector General and OIG staff met with the Director General of MOFCOM's Department of Scientific and Technological Development and Trade in Technology and his staff to discuss the progress of end-use visits in China and to assess the Chinese government's views on U.S. dual-use export controls.

While in China, we also met with representatives from U.S. companies in the aircraft manufacturing, computer technology and software, cooling equipment, electronics, petrochemicals, and telecommunications industries. In addition, we met with officials from several trade and industry associations in-country, including the American Chamber of Commerce, U.S.-China Business Council, Association for Manufacturing Technology, China Aerospace Science and Technology Corporation, Quality Brands Protection Committee, and Semiconductor Equipment and Materials International.

Following our overseas visit, we met with a former ECO to Beijing. We also briefed the Under Secretary and Deputy Under Secretary for Industry and Security on our preliminary findings.

Review of export control laws and regulations, relevant BIS guidance, and other documents. We examined current and prior legislation, executive orders, and related regulations, including the EAR, and prior OIG and GAO reports on export controls. In addition, we reviewed the following documents, covering the period of FYs 2004 and 2005 (unless otherwise indicated):

- Complete licensing histories for 146 China and Hong Kong cases processed at the OC and ACEP;
- ECASS China and Hong Kong end-use check summary data (FY 2001-2005);
- Response cables from post for 228 China and Hong Kong end-use checks that were initiated and/or completed in FYs 2004-2005 and their corresponding licensing histories;
- Export control documentation and program materials maintained by the export control officers in Hong Kong and China; and,
- BIS directives and procedures related to license monitoring.

Review of NIST and NOAA Activities under the S&T Agreement

Our methodology included the following activities:

Interviews at NIST and NOAA. At NIST, we interviewed key management staff from the Office of International Academic Affairs, the Chief Counsel's Office, Office of the Chief Information Officer, Emergency Services Division, and Commerce's Office of Security at NIST. In addition, we interviewed key management officials and staff members from five of the seven main NIST laboratories: Materials Science & Engineering; Electronics & Electrical Engineering; Manufacturing Engineering; Physics; and Information Technology Laboratories.

At NOAA, we spoke with employees from NWS and the National Ocean Service (NOS) in the metropolitan Washington, DC, area who had sponsored multiple Chinese foreign nationals during FYs 2004 and 2005.[40] In addition to NWS and NOS, we also spoke with managers and key representatives from OAR, the National Marine Fisheries Service, the National Environmental Satellite, Data, and Information Service, and the Office of Marine and Aviation Operations to ascertain their understanding of deemed export controls. We also talked with managers and staff from the Office of the Chief Administrative Officer, the Office of the General Counsel, and Commerce's Office of Security at NOAA.

Review of documentation related to the 1979 S&T Agreement. We reviewed the texts of the four protocols – two for each bureau – that were entered into by both NIST and NOAA with the Chinese government, lists of Chinese foreign national visitors and guest researchers who visited NIST and NOAA facilities, and lists of the NIST and NOAA employees who visited China under these protocols.[41] We also reviewed NIST and NOAA documentation regarding the 1979 S&T Agreement. Finally, we reviewed NIST and NOAA travel policies and regulations as well as Office of Security policies and regulations on foreign national access to Commerce facilities.

We also spoke with the Director of the Department's Office of Security and other OSY senior managers and staff concerning OSY's foreign national visitor clearance process and its counterintelligence briefing program for Commerce travelers to China.

[40] NOS employees sponsored Chinese foreign nationals who were located at either OAR or NWS facilities.
[41] NIST did not explicitly identify Chinese national visitors as participants of protocol-driven activities. Thus, our review included all Chinese citizens visiting NIST during FYs 2004-2005, excluding those who were permanent U.S. residents.

OBSERVATIONS AND CONCLUSIONS

I. Export Control Regulations and Procedures Related to China Should Be Strengthened

The current dual-use export control regulations do not prevent the Chinese military from receiving U.S. commodities that can be used in the development of conventional weapons. Specifically, according to BIS, there is no regulatory basis to deny an export license application for items the United States has determined should be controlled only for nonproliferation reasons that potentially could be used to enhance China's military capabilities solely on the basis of military end-use if the item is not controlled for "National Security" (NS) reasons. In addition, BIS' public statements about export policy for military end-users in China are not consistent with export control regulations. BIS publicly states that it has a policy of denial for exports to military end-users in China, but the regulations provide only a limited range of items subject to the denial policy.

A. BIS regulations raise some conventional weapons concerns

According to BIS, there is currently no basis in the EAR to deny an export license application solely on the basis of military end use if the exported item or technology is not controlled for NS reasons under the CCL. As a result, Chinese military end users may be receiving sensitive U.S. commodities that could be used in the development of conventional weapons. Specifically, based on our review of license applications escalated to the OC and the ACEP in FYs 2004 and 2005, we found two instances where licenses were approved even though *all* of the licensing review agencies agreed that there were significant concerns over the risk of diversion to unauthorized end users and/or end use.

Reasons for Export Control

The Export Administration Act (EAA) of 1979, as amended, provides for several categories of export controls, which include (1) national security, (2) foreign policy, and (3) short supply based controls, and provide the authority for the "reasons for control" used in the EAR. The foreign policy controls authorized by the EAA are not seen in the EAR as a specific "reason for control," but provide the statutory basis for other, specific reasons for control, such as missile technology, chemical and biological weapons, crime control, and anti-terrorism controls. National security and short supply are terms used by the EAA as a category of controls, as well as in the EAR as specific "reasons for control."

For each of these categories, the EAA imposes particular criteria and limitations. Consequently, when a term such as "national security" is used as a "reason for control," it has a very specific meaning that reflects statutorily prescribed conditions and limitations and does not necessarily coincide with general usage of the term. For example, the export of a particular item may raise national security concerns in the broad, general sense of the term, but "national security controls" cannot be placed on an item unless it meets specific requirements of the EAA. One such requirement for national security-based controls is that multilateral controls (i.e., Wassenaar Arrangement controls) must be in place if the controls are to be in effect longer than six months. By contrast, foreign policy-based controls may be imposed unilaterally, although other conditions may apply.

CCL Reasons for Control

- Anti-Terrorism (AT)
- Chemical and Biological Weapons (CB)
- Crime Control (CC)
- Chemical Weapons Convention (CWC)
- Encryption Items (EI)
- Firearms Convention (FC)
- Missile Technology (MT)
- National Security (NS)
- Nuclear Nonproliferation (NP)
- Regional Stability (RS)
- Short Supply (SS)
- United Nation Embargo (UN)

Source: *Export Administration Regulations*

Part 742 of the EAR sets forth the licensing requirements and policies for all reasons for control that are listed on the CCL for a particular export control classification number (ECCN) (see box above). Read in combination with the Commerce Country Chart, the reasons for control listed on the CCL for particular ECCNs indicate whether a license is required to export an item to a particular country. For each reason for control, the EAR provides a licensing policy that sets forth factors that will be considered before approving or denying a license application. NS is the only reason for control that would allow a license application for China to be denied solely on the grounds that the item may be intended for military end-use.

China Cases of Concern

During our review, we identified two export license applications that raised general national security concerns, which were approved because the items were not controlled for NS reasons in the EAR. Details of the two cases are outlined below:

Case 1. The first case involved exporting 100,000 pounds of hydrofluoric acid solutions and 55,000 pounds of metal acid etchant solution to be used in the manufacturing of semiconductor wafers. The chemicals are controlled for both chemical and biological (CB) weapons and anti-terrorism (AT) reasons on the CCL. Supplement No. 1 to Part 738 of the EAR (the Commerce Country Chart) provides that CB controls apply to China, but that AT controls do not. Section 742.4(b) of the EAR sets forth the licensing policy for CB reasons for control and provides that license applications will be considered on a case-by-case basis to determine whether the export would make a material contribution to the design, development, production, stockpiling or use of chemical or biological weapons.

Three of the four licensing review agencies (Commerce, Energy, and State) initially recommended approval because there was no specific chemical and biological weapons justification for denial. But Defense recommended denial so the case was automatically escalated to the OC. At the November 2004 OC meeting, Commerce, Energy, and State maintained their recommendations to approve the license application. Defense still had concerns about the risk of diversion to unauthorized end users and/or end uses and escalated the application to the ACEP. Derogatory intelligence presented at the December 2004 ACEP meeting ultimately led all four licensing review agencies to deny the license application.

After the ACEP decision to deny the application, Commerce's Office of Chief Counsel for Industry and Security prepared an analysis concerning the regulatory basis for denial of an export license for a CB-controlled item. The analysis summarized the licensing policy for CB-controlled items, including the bases upon which a license may be denied. It stated that, "[i]f the item is not controlled for national security reasons, it may not be denied solely on the grounds that it may be intended for military end-use."[42] As a result, during the May 2004 ACEP meeting, the four agencies reversed the decision to deny and instead recommended the license application be approved with conditions "in light of the current export control regulations."

Case 2. The second case involved the export of a gas analyzer to be used for analyzing combustion of burning gases. The analyzer is controlled only for AT reasons and can be shipped to China without a license.[43] However, the transaction raised national security concerns with all of the licensing review agencies.[44] The exporter also was unable to verify the bona fides of the end user, so BIS ultimately denied the license application in August 2003.

In September 2003, the U.S. exporter appealed the decision, arguing a license was not required for the transaction. The former Under Secretary for Industry and Security re-opened the case and sent it to the OC for further evaluation in January 2004. At the February 2004 OC meeting, Commerce and Energy voted to return the license application without action because no license was required, but Defense and State maintained their denials. Pursuant to authorities established in Executive Order 12981, the OC Chairman decided to return the license application without action because no license was required for the transaction.

The State Department formally objected to this decision and escalated the case to the ACEP. At the March 2004 ACEP meeting, three of the four license review agencies (Defense, Energy, and State) voted to deny this application but all agreed to have agency attorneys verify the legal basis for the denial. Subsequently, attorneys from the various license review agencies reportedly met and determined that there was no legal basis for requiring a license or for denying the license application. Ultimately, all four licensing review agencies agreed to return the license application without action.

[42] Memorandum for Operating Committee Chair from the Office of Chief Counsel's Senior Counsel for Regulation, May 21, 2004.
[43] The primary exception would be if there were concerns related to the Enhanced Proliferation Control Initiative (EPCI). However, EPCI was not a factor in this case.
[44] The specific national security concerns are classified.

Conclusion

While the two cases highlighted above had different licensing requirements, a denial on the grounds of "national security" could not be sustained in either of these situations because the items were not controlled for NS reasons under the CCL. Section 742.1(f) of the EAR provides that items on the CCL, other than those controlled for short supply reasons, may be reviewed for missile technology, nuclear nonproliferation, or chemical and biological weapons activities regardless of the stated reason for control under the EAR. This is commonly referred to as the "cross-over provision." Therefore, items controlled for CB reasons may also be reviewed for missile technology and nuclear nonproliferation reasons, but not for national security reasons. There is currently no cross-over provision for items on the CCL to be reviewed for NS reasons if they are not already controlled for such, and, as explained above, they cannot be controlled for NS reasons without corresponding multilateral controls.

To address the problems highlighted above, BIS officials initially informed us that they were proposing a new "catch-all"[45] rule or regulation that would address this weakness in the regulations. Specifically, the draft rule would reportedly require exporters to apply for a license for any exports to China whenever they knew the item was going to an end user or end use that could make a material contribution to the Chinese military capability. However, while the proposed "catch-all" rule was supposed to be based on the agreement reached in December 2003 by the Wassenaar Arrangement members, which was aimed at countries subject to arms embargos, it appeared that the United States was mostly alone in applying the restrictions for exports to China. Given the many complaints from U.S. industry concerning its intentions on this matter, BIS is currently working with its interagency partners to draft a rule that would meet the policy goal of denying U.S. exports to Chinese military end uses, while having the least impact on U.S. exporters and their efforts to increase legal exports to Chinese civilian end users.

In the current security environment, the U.S. government should give the interagency licensing review agencies explicit authority to deny licenses for items that can be used to enhance the military capabilities of countries of concern, including China. This will require adding a military "catch-all" similar to the proposed Wassenaar Arrangement catch-all rule or a "national security cross-over" provision to the EAR. A military "catch-all" for China also will help BIS fulfill its stated policy of denying "military-related" export license applications for exports to China.

RECOMMENDATION:

We recommend that BIS review the issue to determine whether it warrants regulatory revision, such as the addition of a military "catch-all" provisions to the EAR for items that could contribute to the development of conventional weapons but are not specifically controlled for national security reasons, and implement the revision, as appropriate.

[45] At the urging of the United States, the 33 members of the Wassenaar Arrangement agreed to a Statement of Understanding on the control of otherwise uncontrolled dual-use items in December 2003. The SOU requires member countries to take appropriate measures to ensure that a government authorization is required for exports of non-listed dual-use items for military end uses in destinations subject to (1) a binding United Nations Security Council arms embargo, (2) any relevant regional arms embargo that is binding, or (3) any relevant regional arms embargo to which a participating state has voluntarily consented to adhere.

In its written response to our draft report, BIS stated that it has completed its review of this issue and incorporated the results in a draft rule that BIS is preparing with respect to China in accordance with the Wassenaar Statement of Understanding regarding exports to countries subject to arms embargoes. BIS anticipates final interagency agreement on the draft rule and publication in proposed form for public comment by late spring 2006. We look forward to reviewing a copy of the proposed rule when it is completed.

B. BIS' public statements regarding licenses to China are inconsistent with the EAR

Section 742.4(b)(7) of the EAR sets forth the licensing policy for exports to China of items controlled for NS reasons on the CCL:

> For the People's Republic of China, the *general licensing policy is to approve applications*, except that those items that would make a direct and significant contribution to electronic and anti-submarine warfare, intelligence gathering, power projection, and air superiority receive extended review or denial. Each application will be considered individually. *Items may be approved even though they may contribute to Chinese military development or the end-user or end-use is military* [emphases added].

By contrast, BIS officials have repeatedly stated that BIS does not approve export licenses to military end users in China. In testimony presented to Congress in April 2005, the then-Acting Under Secretary for Industry and Security stated that "BIS . . . does not approve licenses for military end-users or end-uses within China."[46] Again in June 2005, testifying before the U.S.-China Economic and Security Review Commission, he stated that "we do not approve any licenses for military end-users or end-uses within China …"[47] Several BIS officials reiterated this policy to us during the course of our inspection.

As a result of this inconsistency, export control licensing policy for China is not transparent to exporters, who must rely on the regulations to know whether a license is required, if an application is likely to be approved, and what the regulatory standard will be for reviewing the application. The inconsistency may also cause difficulties in implementation and application of export controls and send mixed signals to our allies, trading partners, the U.S. Congress, and the public.

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[46] Testimony of The Honorable Peter Lichtenbaum, Acting Under Secretary for Industry and Security, United States Department of Commerce, Before the House Armed Services Committee and the House International Relations Committee on the "EU Arms Embargo Against China," April 14, 2005. Available at http://www.bxa.doc.gov/News/2005/PeterTmony4_14_05.htm, accessed March 7, 2006.

[47] U.S.-China Economic and Security Review Commission. *U.S.-China Trade Impacts on the U.S. Defense Industrial Base: Hearing Before the U.S.–China Economic and Security Review Commission*, 109th Cong., 1st sess., 23 June 2005. Washington, D.C.: GPO, 2005. Available at http://www.uscc.gov/hearings/hearingarchive.php#hearings2005, accessed March 13, 2006.

BIS agrees that the export licensing policy in the EAR may not fully reflect BIS' existing policy. BIS reported that it is aware of the issue and is examining the issue. BIS officials informed us that it is likely to be addressed in the pending regulation mentioned in section A above.

RECOMMENDATION:

We recommend that BIS develop one consistent policy regarding exports to military end users or for military end uses in China and amend the regulations as necessary to reflect that policy.

In its written response to the draft report, BIS stated that the draft rule implementing the Wassenaar Statement of Understanding with respect to China referred to in its response to recommendation one will also address this issue. Again, we look forward to receiving a copy of the proposed rule when completed.

II. BIS' End-Use Check Programs in China and Hong Kong Need to Be Improved

End-use checks can play an important role in helping to ensure that exported technologies are protected from diversion to unauthorized end users or end use. Given the importance of both China and Hong Kong in U.S. export control matters, BIS assigns one of its export enforcement agents to each of these posts to conduct end-use checks. While the reluctance of the Chinese government to allow end-use checks has historically precluded the U. S. government from performing many checks, agreement to the *End Use Visit Understanding*[48] by both countries in April 2004 afforded BIS the ability to conduct end-use checks on a wider spectrum of licensed goods and technologies. Nonetheless, a number of the terms for conducting end-use checks outlined in the agreement are restrictive. In addition, during the time of our review, we found many PLCs and PSVs to be untimely. A more extensive discussion of these issues is provided in the classified Appendix C.

Furthermore, while we believe the posting of an ECO in Hong Kong has served to strengthen the strong U.S.-Hong Kong cooperation on export control matters by providing consistency in U.S. government operations there, we determined that BIS is not aggressively monitoring potential diversions of export-controlled items from Hong Kong to China. Specifically, despite BIS' end-use check requirements for Hong Kong and the placement of an ECO in Hong Kong in March 2004, there were a low number of PSVs conducted in FY 2005. In addition, we determined that BIS was not adequately targeting PSVs for shipments that can be exported to Hong Kong without a license but that would require a license to China. Finally, we noted that BIS does not have a formal staffing plan in place to ensure continuity in its assignments of ECOs in Hong Kong and China.

A. End-use checks in China still face challenges

Due to the classified nature of the material discussed in this section, we offer our specific findings related to this topic in the classified Appendix C to this report.

B. BIS needs to more aggressively monitor potential diversions of export-controlled items from Hong Kong to China

As mentioned previously, the U.S.-Hong Kong Policy Act of 1992 calls upon the U.S. government to continue to treat Hong Kong as a separate territory with respect to economic and trade matters and to support Hong Kong's continued access to sensitive technologies so long as such technologies are protected. The Act also requires the Secretary of State to provide Congress with periodic reports on conditions in Hong Kong, including any significant problems in cooperation between Hong Kong and the United States on export controls. According to State's 2005 U.S.-Hong Kong Policy Act Report, end-use checks have been a key factor in evaluating the effectiveness of Hong Kong's export control system. Given the strategic

[48] The U.S. Department of Commerce and the Chinese Ministry of Commerce signed the *End Use Visit Understanding* on April 12, 2004.

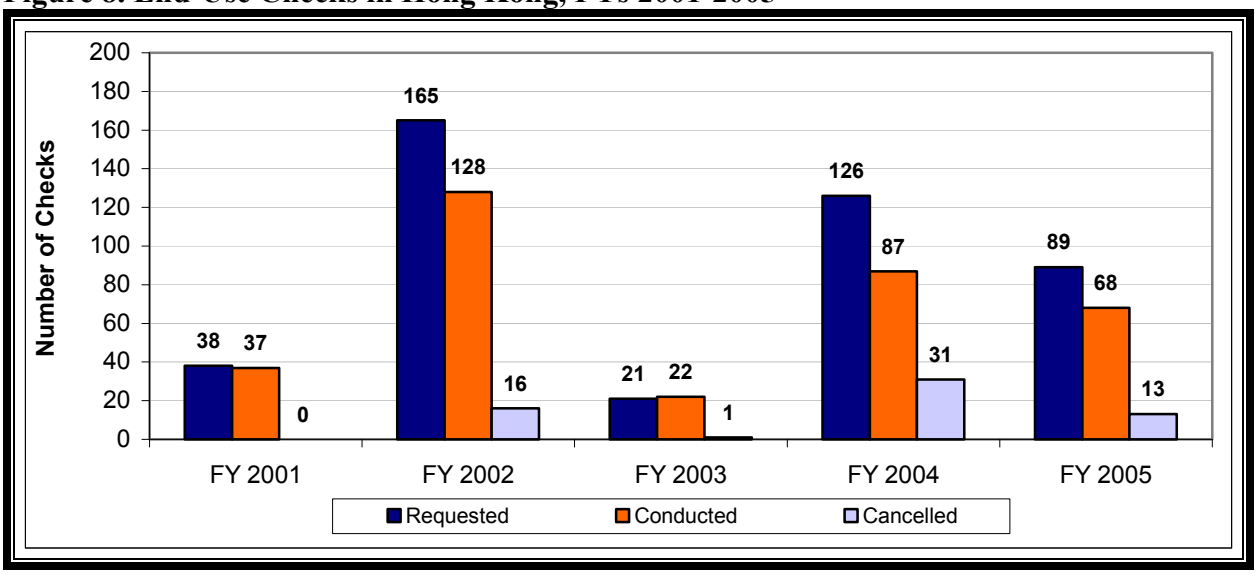
importance of Hong Kong as a key transshipment hub[49] for both China and other countries, BIS placed an ECO at the U.S. consulate in Hong Kong in March 2004.

However, based on our review of BIS' Hong Kong end-use check program, we determined that BIS is not aggressively enough monitoring potential diversions of export-controlled items from Hong Kong to China.

Number of PSVs conducted in Hong Kong did not meet BIS' requirement

In response to problems identified during previous OEE Sentinel trips, the former Under Secretary for Industry and Security approved a decision memorandum, dated January 2004, from the former Assistant Secretaries of Export Administration and Export Enforcement instituting various export enforcement policies related to Hong Kong. With regard to end-use checks, OEE and OEA were instructed, "to strive for at least two Hong Kong PSVs per week" once the ECO was stationed at post. In addition, OEA was instructed to initiate a PLC on any new non-governmental end user in Hong Kong.

Figure 8. End-Use Checks in Hong Kong, FYs 2001-2005



Source: Office of Enforcement Analysis, Bureau of Industry and Security

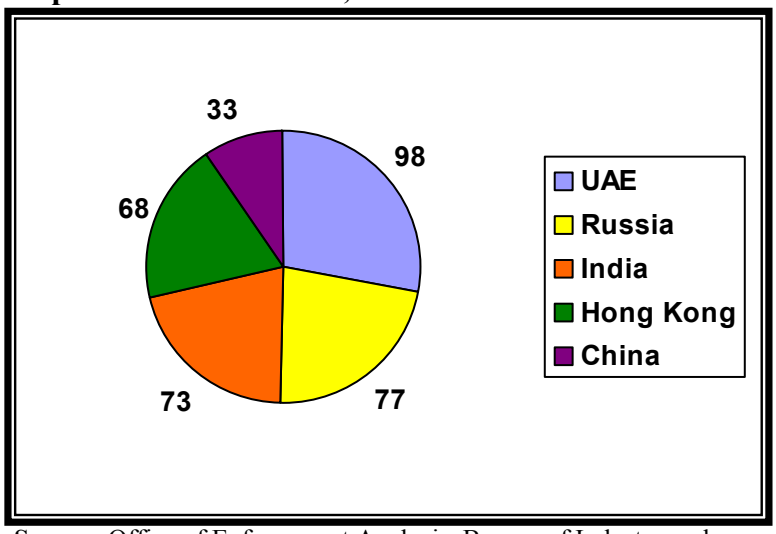
Although the ECO arrived at post in April 2004, only 68 end-use checks (including 50 PLCs and 18 PSVs) were conducted in FY 2005.[50] (See Figure 8 above for the total number of end-use checks completed in Hong Kong during FYs 2001-2005.) While OEA did initiate PLCs on new non-governmental entities associated with export license applications to Hong Kong during FY 2005, it did not fulfill the PSV requirement. OEA's Director for the China/Hong Kong Division

[49] A transshipment hub is a global commerce port that processes large volumes of shipments. Most transshipment hubs are located near countries of concern. The proximity of transshipment hubs to destinations of concern increases the risk of sensitive technologies being diverted or illicitly re-exported to those destinations.
[50] Of the 89 end-use checks initiated in FY 2005, 68 were conducted, 13 were cancelled, and 8 were pending as of September 30, 2005.

informed us that she did not learn of the Under Secretary's guidance on end-use checks in Hong Kong until July 2004. She also stated that her staff focused on meeting the PLC requirement immediately and they did not put as much emphasis on the PSV requirement.

It should be noted that at some point in FY 2006, BIS made the decision to require all of its ECOs, with the exception of China, to conduct at least 50 end-use checks a year. According to the Deputy Under Secretary for Industry and Security, the rationale behind the decrease in the number of end-use checks required for Hong Kong (as well as the other remaining posts where ECOs are stationed) is based on a "general rule of thumb." Specifically, the expectation is that the ECOs should at least be able to conduct one end-use check a week. Given that all of the posts, with the exception of China, conducted more than 50 end-use checks in FY 2005, it appears that this new performance metric may be rather low (see Figure 9).

Figure 9: Number of End-Use Checks Conducted per Export Control Officers, FY 2005



Source: Office of Enforcement Analysis, Bureau of Industry and Security

In a comparison of the five overseas posts where BIS has an ECO, Hong Kong ranks fourth in the number of end-use checks conducted in FY 2005. We noted that prior Sentinel[51] visits to Hong Kong usually resulted in the completion of a relatively large number of end-use checks in a short time period. For example, the most recent Sentinel visit to Hong Kong in October 2003 resulted in the completion of 70 end-use checks in a 12-day period. Furthermore, during our visit to Hong Kong in September 2005, we accompanied the ECO on three PSVs—all conducted on the same day. As such, it seems reasonable that the ECO could conduct more than 50 checks a year—particularly PSVs—if headquarters requested them.

Lack of PSVs on "No License Required" Shipments

There are some commodities controlled for export to China that do not require a license to Hong Kong. For example, exporters may export a range of items controlled for NS reasons, certain high-performance computers, and some items controlled for chemical and biological reasons to Hong Kong under the designation "No License Required" (NLR). By contrast, China is not entitled to obtain any NS-controlled items on a NLR basis.

[51] BIS' Sentinel program (formerly known as Safeguards) conducts on-site end-use check visits overseas using two-person teams comprised of OEE special agents.

Given the concern about diversions of sensitive U.S. technologies from Hong Kong to China, it seems reasonable that the U.S. government should target shipments for PSVs that may not require a license to Hong Kong but would require a license to China. Toward that end, 7 of the 18 PSVs initiated in FY 2005 involved NLR shipments. However, four of the PSVs were covered by a license exception and were eligible for re-export from Hong Kong to China without a license. As a result, these checks were an inefficient use of ECO resources. Specifically, the ECO ended up conducting checks on commodities that would not require a re-export license to China at the expense of doing more checks on items that would. There appear to be two main reasons for the poor targeting of NLR shipments to Hong Kong, including (1) inadequate upfront research by OEA and (2) inadequate intelligence sharing between OEE and OEA.

Inadequate Upfront Research by OEA. With regard to Hong Kong, OEA mainly focused its resources on reviewing actual export license applications submitted to BIS. OEA informed us that it attempted to target some NLR shipments to Hong Kong that would require a license (or re-export license from Hong Kong) to China, but had trouble doing so because of the limitations in the Automated Export System (AES).[52]

AES is the automated system that U.S. exporters use to file their Shipper's Export Declarations (SEDs). Each SED must be filled out with relevant export transaction information, including (1) the exporter's contact information, (2) a description of the commodity to be exported, (3) the consignee's contact information, and (4) the shipment's country of destination. If the commodity involved requires a BIS export license, AES requires that a valid ECCN of up to the first five digits be entered into one of the fields.[53] If a license is not required, then the exporter must note "NLR" or type in the applicable license exception on the SED. However, many ECCNs contain subparagraphs that describe varying parameters of the items that might determine whether NLR or a license exception may be used.

Because AES does not require (nor record) these subparagraphs, OEA is unable to definitively know whether an item would qualify for shipment under NLR or a license exception. Nevertheless, despite the known limitations in AES, OEA did not routinely contact U.S. exporters for more information about particular transactions to determine if the export met a license exception for China prior to initiating PSVs in Hong Kong.

We agree that having an expanded ECCN field within AES would allow OEA (or other export enforcement officials) to better target PSVs that could identify questionable export transactions whereby exporters might be misusing NLR or a license exception in attempts to divert the licensed items to third countries. Both Census and OEA officials stated that they are open to the

[52] AES was primarily developed in 1994 by the U.S. Census Bureau and the former U.S. Customs Service for U.S. exporters and authorized agents to electronically file their Shipper's Export Declarations (SEDs)—a Census form used to compile trade statistics and assist in export enforcement matters. The AES mainframe that processes the export information belongs to U.S. Customs and Border Protection (one of the successor agencies to the U.S. Customs Service) while AESDirect, the Internet based application that collects and sends export information to AES, belongs to Census. Census is the agency responsible for collecting, compiling, and publishing export trade statistics. AES is the primary media used for collecting export data.

[53] An ECCN typically consists of one number, followed by one letter and then three consecutive numbers (e.g., 4A101).

possibility of working together to modify AES by expanding the ECCN field. However, pending the outcome of any AES modification, OEA should obtain as much information upfront about a NLR transaction from the exporter prior to initiating a PSV request.

Inadequate Intelligence Sharing between OEE and OEA. During the course of our review, we found that OEE had information that may have been useful to OEA for targeting end-use checks (including NLR shipments) in Hong Kong. However, OEE did not forward that information to OEA until after our discussions with OEE about it. We have included this discussion in a classified appendix to this report (see Appendix D).

Conclusion

Based on discussions with BIS officials and various U.S. officials at the U.S. Consulate in Hong Kong, the United States has close and beneficial relations with the Hong Kong Customs & Excise Department and the Hong Kong Trade & Industry Department which provides the basis for Hong Kong's continued access to exports of controlled U.S. technologies. The U.S. government remains committed to continuing its existing export control policy toward Hong Kong, consistent with the provisions of the U.S.-Hong Kong Policy Act, as one means of demonstrating its support for Hong Kong's autonomy.

Nonetheless, some U.S. government officials have raised concerns about the actual and potential risk of diversion of sensitive technologies through Hong Kong. These concerns center on China's possible use of Hong Kong to obtain sensitive technologies illicitly and as a medium through which to ship controlled technologies to other countries of concern. While we believe the posting of an ECO in Hong Kong has served to strengthen the strong U.S.-Hong Kong cooperation on export control matters, it is important for the United States to aggressively monitor trade with Hong Kong to ensure that exported technologies are protected from diversion or misuse. Therefore, we believe BIS needs to use its available resources as effectively as possible to ensure that end-use checks reflect the full range of U.S. export control concerns in Hong Kong.

RECOMMENDATIONS:

We recommend that BIS take the following actions to improve its end-use check program in Hong Kong:

- Increase the number of end-use checks that should be conducted in Hong Kong based on past performance;
- Improve the targeting of end-use checks in Hong Kong through (a) adequate upfront research on no-license-required shipments prior to post shipment verification requests, (b) enhanced and continuing intelligence sharing between its Office of Export Enforcement and its Office of Enforcement Analysis; and (c) the utilization of intelligence information to help identify appropriate end-use checks; and,
- Work with the U.S. Census Bureau to modify the Automated Export System to expand the Export Control Classification Number field from the current five digits to eight digits.

In its written response to our draft report, BIS stated that it generally agreed with our recommendation to reevaluate the number of end-use checks that should be conducted in Hong Kong based on past performance. In addition, BIS' response stated that in December 2005 BIS Export Enforcement reassigned an analyst to assist on Hong Kong end-use check targeting. It also noted that the upcoming reorganization of BIS' Office of Enforcement Analysis, including the selection of a senior executive service-level director, would result in an increase in the quantity and quality of BIS resources supporting license reviews and end-use checks. The response further stated that quality is as important as quantity in selecting end-use checks and that it is important to target and select meaningful end-use checks that provide BIS with the most targeted and relevant information possible to assist in making license decisions or in detecting potential diversions to unauthorized end uses or end users. We agree that quality end-use checks are a critical component to BIS' end-use check program in Hong Kong and, as discussed below, are encouraged by BIS' commitment to focus on this matter. However, in addition to ensuring good quality end-use checks are conducted, it is also important for BIS to ensure that it conducts an appropriate number of end-use checks in Hong Kong given the placement of an ECO there and the need to monitor Hong Kong's ability to maintain an effective and transparent export control regime. As noted in our report, it appears that BIS' current performance metric of conducting 50 end-use checks a year may be rather low given past performance and as a result, we modified our recommendation in this area to encourage BIS to increase this number.

With regard to better targeting of end-use checks in Hong Kong, BIS' written response stated that it agreed with our recommendations and is already taking steps to improve efforts in this area. Specifically, the response stated that based on feedback received during a conference with all BIS Export Control Officers in October 2005, Export Enforcement revised its overall targeting and selection of end-use checks to the locations where its ECOs are located, including Hong Kong. In addition, BIS noted that the upcoming reorganization of OEA is designed in part to improve coordination between OEA and OEE on sharing intelligence information which will help to identify appropriate end-use checks in Hong Kong. To this end, and prior to the formal completion of the reorganization, OEA and OEE reportedly began joint weekly meetings in December 2005 to review all available export control intelligence information to ensure maximum coordination between the two offices.

Furthermore, BIS stated that it agrees with our recommendation for BIS to work with the Census Bureau to determine the applicability of modifying the Automated Export System to expand the Export Control Classification Number field from the current five-digits to eight-digits. Towards that end, BIS reported that it is drafting the regulatory changes necessary to implement this recommendation and will soon publish an Advance Notice of Proposed Rule Making in the *Federal Register* to solicit comments from industry on the impact of expanding the Automated Export System fields. BIS stated that it will also consult with the Census Bureau in developing this regulation. Again, as noted in our report, this modification should better enable OEA or other export enforcement officials to better target PSVs that could identify questionable export

transactions whereby exporters might be misusing a license exception in attempts to divert the licensed items to third countries. We are encouraged by BIS' actions to date and look forward to reviewing the advance notice of proposed rule when complete.

C. BIS needs to improve staffing continuity for its operations in Hong Kong and China

BIS does not have a formal staffing plan to help ensure continuity in its ECO assignments in Hong Kong and Beijing, China.[54] Currently, there is no pool of talent within BIS (e.g., personnel with both Mandarin Chinese language skills and export enforcement experience) from which to draw replacement ECOs. The ECO position is a limited non-career position within CS. Normally, the ECO position is a two-year assignment (with possible extensions). BIS' first ECO in Hong Kong was originally scheduled to depart post in March 2006; however, he has recently extended his tour until May 2006, thus lessening the gap between the time he leaves and the placement of his successor. In addition, the term of the current Beijing ECO expires in December 2006.

Interruptions in carrying out in-country BIS operations have and may continue to occur without a plan to ensure continuous staffing of the ECO positions. With respect to China, end-use checks must be scheduled and conducted per the terms of the *End Use Visit Understanding*, making it important to continuously staff that position. Since 2001, there have been two gaps of 3-months duration in BIS operations in China (see Figure 10). Specifically, in September 2001, the first ECO's term in Beijing expired. Though BIS had already selected a special agent with Mandarin Chinese language skills from one of its domestic field offices, that agent was unable to assume his post immediately upon the ECO's departure. The second gap occurred in September 2004 when the second ECO resigned his post. In December 2004, BIS hired a special agent with Mandarin Chinese language ability from another federal agency already stationed at post. During both of these gaps, BIS relied on CS staff to conduct end-use checks.

Figure 10: Gaps in BIS Operations in China

Source: Bureau of Industry and Security and the U.S. & Foreign Commercial Service

ECOs stationed in Hong Kong and Beijing are normally required to have export control knowledge and skills needed to conduct end-use checks and handle other necessary export control responsibilities. In addition, it is highly desirable for these ECOs to have Mandarin

[54] While our review focused only on Hong Kong and China, this issue may also be applicable for the ECO assignments in Abu Dhabi, United Arab Emirates; Moscow, Russia; and New Delhi, India.

Chinese language ability. While CS informed us that both Hong Kong and Beijing are language-designated posts for its officers, the ECO positions are not language-designated positions.

However, the November 2005 vacancy announcement for the Hong Kong ECO position stated that "[a]pplicants proficient in the host country language, Chinese, are highly desired." However, it should be noted that for a candidate with no Mandarin Chinese language ability to attain the CS language requirement for either Hong Kong or Beijing would entail specialized language training of up to one year.

Prior to establishing the ECO position in Hong Kong, BIS relied on CS staff and Sentinel teams to conduct end-use checks there. However, as stated in section B of this Chapter, the posting of an ECO in Hong Kong has served to further strengthen the strong U.S.-Hong Kong cooperation on export control matters by providing consistency in U.S. government operations there. In addition, it may be difficult to use Sentinel teams to conduct end-use checks in China given the current terms of the *End-Use Visit Understanding* (see Appendix C for our assessment of end-use checks in China). Further, given the importance of conducting end-use checks in a timely manner by knowledgeable personnel, the use of occasional Sentinel teams may not suffice.

BIS knew of the Hong Kong ECO's planned departure since the summer of 2005; however, it did not post a vacancy announcement for this position until mid-November 2005. In February 2006, the Deputy Under Secretary for Industry and Security informed us that BIS had identified a candidate for the ECO position in Hong Kong. This individual is an attorney but does not have law enforcement experience or Mandarin Chinese language skills.[55] Given the 10 weeks of basic law enforcement training the new ECO will have to undertake and other pre-travel requirements (e.g., security and medical clearances), he is not expected to arrive at post until July 2006. While the process is moving forward, BIS needs to develop a plan to avoid future gaps in assignments in these two critical, overseas posts.

RECOMMENDATION:

We recommend that BIS develop a staffing plan to provide continuity in the stationing of qualified export control officers in Hong Kong and China to avoid interruptions in operations and initiate that plan at least 6 to 12 months before the end of the term of the departing export control officer.

In its written response to our draft report, BIS agreed with our recommendation and stated it will include as a critical element in the performance plan of the OEE coordinator of the ECO program a requirement to coordinate and prepare the necessary vacancy announcements 6 to 12 months prior to the end of each ECO's assignment. However, BIS noted that it may be difficult creating a pool of qualified ECOs for future assignments given the relatively small size of its personnel,

[55] In addition to seeking candidates with Mandarin Chinese language ability, the vacancy announcement called for candidates with specialized experience in conducting criminal investigations and a knowledge of U.S. export control laws and regulations.

and, therefore, cautioned that future gaps in coverage may still occur. However, BIS did state that in order to minimize the impact of any future gaps in assignments, it will ensure that there is coverage in place in case of such a vacancy. We acknowledge BIS' concerns in this regard and appreciate its commitment to ensure maximum coverage in future ECO assignments.

III. BIS' Monitoring of License Conditions Could Be Enhanced

The EAR states that an export license may be limited by conditions on the use of the export. The ability to place conditions on a license is an important part of the license approval process as well as an additional means to monitor certain shipments. Frequently, the conditions are the result of lengthy negotiations among the licensing referral agencies.

Of the 55 possible standard conditions, six require the exporter to submit documentation to BIS regarding the shipment. For example, two require the exporter to provide different types of delivery verification documents; one involves notification to BIS after the temporary demonstration of a U.S. item overseas; one requires notification to BIS after the return of an aircraft on temporary sojourn to a foreign country; one involves the submission of a post shipment report on exports of high-performance computers to certain countries; and one involves the submission of a shipper's export declaration (SED) following shipment of the item (so that a PSV can be initiated). A seventh condition – referred to as "Write Your Own" (WYO) – allows licensing officers (LO's) to formulate unique requirements, which may include reporting requirements for either the exporter or the end user. Licenses with reporting conditions are tracked in either Export Administration's or Export Enforcement's Conditions Follow-up Subsystem within ECASS.[56]

In our FY 1999 export licensing report and FY 2003 export enforcement report,[57] we found that Export Administration and Export Enforcement were not consistently monitoring licenses with reporting conditions and therefore were not following up with exporters to ensure compliance. In response to our recommendations, both EA and EE instituted procedures to (1) regularly monitor licenses with reporting conditions that are marked for follow-up by LOs and (2) follow-up with exporters to request any necessary reporting documentation.

Within EA, the Office of Exporter Services (OExS) is responsible for monitoring exporter compliance with five of the seven reporting conditions, including WYO conditions that have reporting requirements. Of these five conditions, four involve the submission of routine documentation, such as delivery verification, that do not require a level of technical expertise to verify. If an LO marks a license with any of these conditions, the license is automatically entered into EA's Follow-up Subsystem.

By contrast, WYO conditions may sometimes contain substantive reporting requirements, such as maintenance reports and technology control plans, which require some level of technical review. For these conditions, the LO must choose "yes" or "no" in the WYO screen indicating (1) whether the condition requires follow-up and (2) whether the documentation requires an LO's review. The license is only entered into EA's Follow-up Subsystem if the LO marks "yes" for "follow-up" required.

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[56] Licenses requiring exporters to submit post shipment reports on high-performance computer exports to certain countries are monitored separately from Export Enforcement's Conditions Follow-up Subsystem.
[57] U.S. Department of Commerce Office of Inspector General (Commerce OIG), June 1999. Improvements Are Needed to Meet the Export Licensing Requirements of the 21st Century, IPE-11488; Commerce OIG, March 2003 Improvements Are Needed to Better Enforce Dual-Use Export Control Laws, IPE-15155.

Within EE, the Office of Enforcement Analysis (OEA) is responsible for monitoring licenses marked with the remaining reporting conditions— the submission of post shipment reports on high-performance computer exports to certain countries, referred to as "Condition 34," and of SEDs, which is referred to as "Condition 14." Licenses with Condition 14 require a PSV on a specific foreign entity following the first shipment made against the license. Exporters are required to submit a copy of the shipment's SED directly to OEA, which then initiates the PSV.

A. BIS should ensure that there is a technical review of technical documentation submitted by exporters or end users pursuant to license conditions

We reviewed all China export license applications processed at the OC and ACEP during FYs 2004 and 2005 and identified 15 that had WYO reporting conditions (excluding Condition 14). Of the 15 cases involving such reporting conditions, four involved the submission of documentation confirming the delivery of shipments, which could be verified by OExS staff. However, 11 cases involved license conditions with more technical reporting requirements, but none of them were marked for LO review. Aside from LO review, there is no procedure in place to provide technical review of the documentation to ensure that exporters or end users are in compliance with license conditions.

The reporting requirements, which were incorporated into the WYO condition of each license, were designed to address particular concerns that either BIS or other licensing referral agencies had about the parties to the transaction or about the transaction itself. In some cases, the condition was designed to address concerns about unauthorized exports or re-exports. Two licenses had conditions that required the end-user or consignee to develop and implement a technology control plan prior to shipment. In another situation, a licensing referral agency was concerned that the item would not be used for its stated purpose, prompting a condition addressing the specific nature of the risk addressed to the exporter, end-user, or both. Other conditions required the submission to BIS of (1) quarterly shipment reports of the exported commodity, (2) an annual report summarizing demonstrations of the item and any measures taken to ensure its security, or (3) a quarterly report on how the item was being utilized.

While these reporting conditions are placed on the exporter and/or end user, BIS does not require any form of technical review of the documentation submitted to ensure that it meets the requirements of the condition. In fact, OExS staff informed us that although LOs have the opportunity to review the documentation, they rarely mark them for review. Without a technical review to ensure compliance, the purpose of placing reporting conditions on the license is defeated.

RECOMMENDATION:

We recommend that BIS put procedures in place to provide for a technical review of technical documentation submitted by exporters and end users to ensure their compliance with license conditions.

In its written response to our draft report, BIS agreed that there may be instances where a technical review of documentation submitted pursuant to license conditions may be warranted. BIS stated that it would conduct an internal assessment, scheduled for completion by May 12, 2006, to determine an appropriate process for conducting technical reviews. We acknowledge BIS' effort and would appreciate a copy of the review results upon their completion.

B. China post shipment verification license conditions were not properly marked for follow-up

As noted earlier, licenses with PSV conditions are marked with Condition 14 and are automatically entered into EE's Conditions Follow-up Subsystem for subsequent monitoring. However, based on our review of China OC and ACEP licenses, we identified five licenses that required PSVs but were not properly marked by the LO with Condition 14. Instead, the text of the PSV condition for each license was recorded in the WYO condition, which, as discussed previously, does not automatically add a license to either EE's or EA's Conditions Follow-up Subsystem. These errors occurred despite the fact that each export license application is reviewed and signed off by a countersigner (typically a division director) to ensure that license applications are processed appropriately. For example, countersigners are responsible for ensuring that license conditions agreed upon at the OC are reflected accurately in the license application.

Of the five licenses, initial shipments were made against three of them – one in November 2004 and two in April 2005.[58] Although the LOs responsible for these licenses neglected to mark Condition 14 on the 5 licenses, it appears that the exporters were compliant in these three cases by submitting copies of their SEDs. Normally, under Condition 14, exporters are instructed to submit copies of SEDs to OEA. However, each of these three licenses contained language instructing the exporter to submit the documentation to OExS. As such, OEA staff stated that it was not aware that any of these licenses had a PSV condition. Had Condition 14 been marked for each license, standard language about the SED requirement (including instructions to submit the documents directly to OEA) would have been included automatically in the list of license conditions that is provided to the exporter. In addition, each license would have been placed in EE's Conditions Follow-up Subsystem for OEA to monitor.

According to "step-by-step procedures" instituted by OExS in response to a recommendation from our FY 2003 export enforcement report, OExS' staff are required to forward to OEA a copy of any license requiring a PSV that has been erroneously marked under the WYO condition along with a standardized memorandum addressed to the Director of OEA notifying him of the error. However, OExS could not find records of having forwarded to OEA copies of these five licenses. OExS staff informed us that if they receive follow-up documentation (which would

[58] Per OExS, exporters had not shipped against the remaining two licenses as of January 17, 2006. However, export licenses are normally valid for two years from the date of approval and at the time of our review, none of the five licenses had expired.

include SEDs) for a license that is not marked for follow-up, the documentation is scanned and archived in a document storage system separate from ECASS without a review. Subsequent to our inquiry, OExS forwarded copies of all five licenses and the three SEDs that had been submitted by exporters to OEA.

Without Condition 14 on a license, OEA staff members do not know that a PSV is required when it is written as a WYO condition and, as a result, a PSV cannot be initiated for the license. In addition, with regard to the specific cases cited above, because of the time that elapsed between the date of shipment and OEA's receipt of the aforementioned SEDs from OExS, OEA informed us it was not able to proceed with a PSV request for any of the Chinese end users associated with these three licenses because of the terms of the *End-Use Visit Understanding.* (See Appendix C for more information on this issue.)

RECOMMENDATIONS:

We recommend that BIS take the following actions to improve its efforts to monitor exporter compliance with license conditions:

- Review the process of marking and countersigning license applications with Condition 14 to identify and correct any weaknesses to ensure that these license applications are properly entered into Export Enforcement's Followup Subsystem and monitored by the Office of Enforcement Analysis.
- Ensure that the Office of Exporter Services promptly forwards to the Office of Enforcement Analysis any copies of shipper's export declarations that are submitted by an exporter.

In its written response to our draft report, BIS stated that on March 16, 2006, it had issued guidance to Licensing Officers and Counter Signers in the form of an email reminding them of the proper procedures for marking Condition 14 and other standard license conditions. While this action partially meets the intent of our recommendation, the response did not discuss whether BIS would review its current process of countersigning licensing applications to ensure that standard license conditions, including Condition 14 and other reporting conditions, are accurately recorded into ECASS and, if applicable, entered into the appropriate conditions follow-up subsystem for monitoring. We would appreciate receiving the results of BIS' review of its license countersigning process in its action plan.

With regards to our recommendation on forwarding SEDs to OEA, BIS' written response stated that staff in the Operations Support Division of the Office of Exporter Services was issued guidance in the form of an email on March 16, 2006, requiring them to forward such documents to OEA within 48 hours of receipt to ensure that PSVs are initiated promptly.

IV. NIST and NOAA Conduct Various Activities Pursuant to the 1979 U.S.-China Science and Technology Agreement

Pursuant to our mandate under the NDAA for FY 2003, we sought to determine what activities Commerce bureaus were engaged in pursuant to the 1979 U.S.-China S&T Agreement and, to the extent practicable, whether they are adhering to export control regulations. Within Commerce, there are two bureaus – NIST and NOAA – that maintained active protocols under the agreement during FYs 2004 and 2005.

We found that NIST appears to be complying with deemed export control regulations with respect to activities undertaken pursuant to the 1979 S&T Agreement. Specifically, the EAR-controlled items we reviewed at NIST appeared to be protected from Chinese foreign national visitors. We found that NOAA still is in the process of developing its export control compliance program; however, NOAA has reportedly placed access controls on all EAR-controlled technology where foreign nationals are present, including Chinese nationals.

We also found that employees from both NIST and NOAA who traveled to China [redacted] We present our findings on this issue in a separate draft memorandum report, [redacted] scheduled to be issued in March 2006.

A. NIST's Science and Technology exchange activities with China

One of NIST's core missions is to exchange information and collaborate on research with similar institutions all over the world to provide products and services of the highest quality. Thus, through its Foreign Guest Researcher Program, NIST offers foreign scientists, including Chinese foreign nationals, the opportunity to work collaboratively with NIST scientists. The Office of International and Academic Affairs oversees all of NIST's interactions with foreign entities and persons and collects information on foreign national visitors and guest researchers at NIST.

During FYs 2004 and 2005, NIST had one active protocol with China's General Administration of Quality Supervision, Inspection, and Quarantine in place.[61] Signed on December 9, 2003, this protocol supports cooperation in the fields of metrology and standards. However, the protocol is very general, and specific activities NIST conducts with its Chinese counterpart organizations and their researchers—such as conferences and joint research projects—are not always identified

[redacted]

[61] NIST signed a second protocol with the Chinese Academy of Sciences at the end of FY 2005, but did not conduct any activities under it during the period of our review.

in relation to it. Several NIST employees we interviewed were not even aware that the protocol is in place.

Many Chinese Foreign Nationals Visited NIST During FYs 2004 and 2005

As with all foreign nationals, NIST categorizes Chinese foreign nationals who visit its facilities into two main groups: short-term visitors who are at NIST for 10 days or less, and long-term visitors who are at NIST for 11 days or more.[62] NIST further segregates long-term visitors into four sub-categories: (1) "foreign guest researchers", (2) "facility users", (3) "contractors", and (4) "Cooperative Research and Development Agreement (CRADA) participants."[63] (See Table 3 for a breakdown of the number and types of Chinese foreign national visitors recorded by NIST during FYs 2004-2005.)

Long-Term Visitors. During FYs 2004 and 2005, a total of 209 long-term Chinese foreign national visitors were at NIST's Gaithersburg, Maryland, and Boulder, Colorado, campuses. NIST's Material Science and Engineering Laboratory hosted 146 of them. Of those, 50 were foreign guest researchers and 95 were facility users at the NIST Center for Neutron Research. The remaining one visitor worked as a CRADA participant at the NIST Center for Neutron Research.

Short-Term Visitors. NIST recorded a total of 352 Chinese foreign nationals visiting NIST facilities on a short-term basis during this same two-year period.[64] These Chinese visitors comprised approximately 11 percent of the 3,230 short-term foreign visitors from over 100 countries who came to NIST during FYs 2004 and 2005. Most of the Chinese short-term visitors came from China's General Administration of Quality Supervision, Inspection and Quarantine; the Chinese Academy of Sciences; other Chinese governmental organizations and laboratories; or universities.

[62] NIST did not explicitly identify Chinese foreign national visitors as participants of protocol-driven activities. Therefore, our review included all Chinese citizens visiting NIST during FYs 2004-2005, excluding those who were permanent U.S. residents.

[63] Foreign scientists who are invited to conduct research at NIST are called "foreign guest researchers". "Facility users" refers to researchers who come to NIST on a short-term basis—10 days or less—to utilize NIST facilities and equipment available for public use and include foreign citizens. (Although they are technically short-term visitors, NIST places them into the long-term category. If facility users require more than 10 days to complete their research, NIST will reclassify them to "foreign guest researcher" status, which requires additional security assurance reviews.) "Contractors" are researchers who are temporarily employed via a sole-source provider to conduct specific research tasks requested by NIST researchers. Finally, while NIST generally does not allow foreign nationals to participate in CRADAs—which may include publication restrictions that could subject the research to export controls—exceptions can be made.

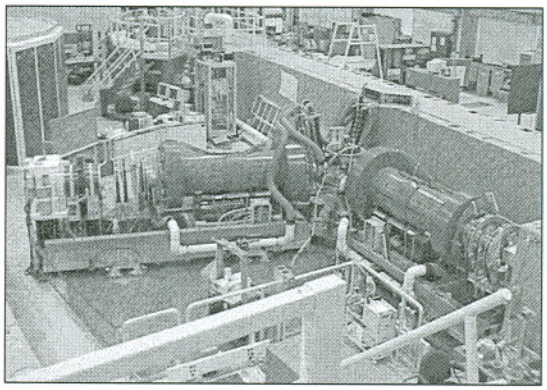
[64] NIST's Office of International and Academic Affairs and the Mountain Region Security Office—which maintains records of foreign national visitors to NIST's Boulder, Colorado, campus— stated that their records of short-term Chinese national visitors during FYs 2004-2005 might be incomplete because NIST's operating units may not always report these visitors to their offices. Further, this figure does not capture all conference attendees at NIST.

EAR-Controlled Items Appear to Be Protected

According to NIST, no Chinese foreign national visitors had access to EAR-controlled items in FYs 2004 and 2005 that would have required a deemed export license. Since the issuance of our FY 2004 report on deemed exports,[65] NIST's Emergency Services Division has developed and maintained an inventory of 129 EAR-controlled items. Most of the EAR-controlled items identified by NIST were controlled for "physical" exports to China, with some of them also controlled for "use" technology that would require a deemed export license.

We inspected 12 of the 129 EAR-controlled items at the Gaithersburg, Maryland, campus to determine whether Chinese foreign national visitors could possibly have access to the controlled technologies. NIST reported that all short-term Chinese foreign national visitors are escorted by NIST personnel at all times, minimizing the possibility that they would have undetected access to EAR-controlled technologies. Although long-term Chinese foreign national foreign guest researchers could gain access to some rooms or laboratories that contained EAR-controlled items, those items were locally secured [redacted]. In addition, although we found that Chinese foreign national facility users and a few Chinese foreign national foreign guest researchers did have access to certain laboratory equipment that involved EAR-controlled items, it appears that the technology remained protected.

For example, the Neutron Spin Echo Spectrometer at the NIST Center for Neutron Research (see photo to the right) contains three tri-axial fluxgate magnetometers that are controlled for "National Security" reasons by the EAR. However, we were told by the Director of the Center that the items—with the dimensions of approximately 3cm x 3cm x 20cm—are embedded deep inside the massive apparatus, and the entire floor area is under constant surveillance [redacted].[66] Moreover, although these items were controlled for exports to China, they were not controlled for "use" technology, and thus, deemed export controls were not applicable in this case.



The Neutron Spin Echo Spectrometer at the NIST Center for Neutron Research

In addition to the development of an inventory for its EAR-controlled equipment, NIST recently implemented a program to conduct "upfront" review of its research activities.[67] Specifically, NIST laboratory managers conduct reviews of NIST researchers' ongoing and foreseeable upcoming research to determine whether technology used and/or created by NIST researchers

[65] U.S. Department of Commerce, Office of Inspector General. *Deemed Export Controls May Not Stop the Transfer of Sensitive Technology to Foreign Nationals in the U.S.,* IPE-16176, March 2004.

[66] The NIST Center for Neutron Research is subject to the Nuclear Regulatory Commission's regulations for facilities with nuclear source material. NIST officials said that the entire facility is under 24-hour surveillance [redacted].

[67] This program was initiated in response to the OIG's 2004 report on deemed exports.

and their staff (which includes foreign guest researchers) are subject to U.S. export control laws. These findings are then recorded in the NIST researchers' performance plans by their managers. If it is determined that any of the technology to be used and/or created during NIST research activities is controlled for export control purposes, NIST would either seek a deemed export license or protect the technology from disclosure to foreign nationals, as appropriate. However, with two cycles of performance reviews conducted in the spring and fall of 2005, NIST informed us that it did not identify any instances where a deemed export license would be required for on-going or upcoming research.

B. NOAA's Science and Technology exchange activities with China

Staff at five of NOAA's line offices[68] collaborate internationally on many projects and issues. Pursuant to the 1979 U.S.-China S&T Agreement, Chinese foreign nationals may visit or work at NOAA research facilities or data centers to undertake joint research projects. Conversely, NOAA scientists and other staff may travel to China to promote the exchange of scientific or technical information through activities such as lectures, collaborative projects, and participation in workshops and conferences.

NOAA has entered into two protocols pursuant to this agreement. The first protocol, with the China Meteorological Administration, is managed on the U.S. side by the National Weather Service (NWS) and covers the field of atmospheric science and technology (subsequently referred to as the atmospheric protocol). The second protocol, with China's State Oceanic Administration, is managed on the U.S. side by the Office of Oceanic and Atmospheric Research (OAR) and covers the field of marine and fishery science and technology (subsequently referred to as the marine and fisheries protocol). We surveyed a sample of U.S.-China S&T activities at NOAA's Silver Spring and Camp Springs, Maryland facilities in order to assess the bureau's compliance with export controls. Although our survey focused on export compliance as it relates to Chinese foreign nationals, we found that NOAA has made progress in fulfilling the recommendations made in our March 2004 deemed export report.

<u>Chinese Nationals Visit NOAA Within and Outside the Protocols</u>

To facilitate our survey, OAR and NWS provided us with lists of Chinese foreign national visitors and guest researchers with access to their facilities both within and outside of the S&T protocols. During FYs 2004 and 2005, 73 Chinese foreign nationals visited NWS facilities under the atmospheric protocol, while 48 Chinese foreign nationals visited OAR facilities under the marine and fisheries protocol. An additional 77 Chinese foreign nationals visited the NWS and OAR facilities for activities outside the protocols.

[68] The five NOAA line offices referred to above include the National Ocean Service, the National Weather Service, the National Marine Fisheries Service, the Office of Oceanic and Atmospheric Research, and the National Environmental Satellite, Data, and Information Service. NOAA's sixth line office, Program Planning and Integration, does not engage in international projects.

We interviewed six officials who, together, had sponsored 27 current and former Chinese foreign national visitors and guest researchers. Based on our interviews, it appears that most of these particular individuals were involved with computer and software development, operations, and support, rather than laboratory research. Much of their work involved routine activities to support daily NOAA operations, such as writing computer programs using publicly available information and open source software to translate daily weather satellite data. Similarly, those who did conduct research, reportedly worked with publicly available information only, such as weather and climate data, and published all of their results. However, it should be noted that NOAA plans to develop a process in FY 2006 to review all of its research to determine the applicability of deemed export control issues.

EAR-Controlled Equipment and Technologies at NOAA Have Been Partially Inventoried

In response to our FY 2004 deemed export recommendations, NOAA established a Deemed Export Steering Committee in mid-2005 to coordinate compliance with dual-use export controls. The Steering Committee, which is composed of senior NOAA managers and staff, instructed each of NOAA's line offices plus the Office of Marine and Aviation Operations to (1) conduct a NOAA-wide inventory review of technology and software, (2) develop technology control plans governing access to export-controlled technologies, and (3) identify all foreign nationals with access to their facilities.

With its operations encompassing over 800 physical locations (including NOAA's ships and airplanes), NOAA divided its export compliance review into two phases, beginning with Priority 1 sites, defined as any location that either has foreign nationals present or contains critical infrastructure. This included any NOAA facilities where research is conducted and foreign nationals are present. By December 2005, NOAA had completed its inventory of equipment and technology at Priority 1 sites, and specifically identified 132 EAR-controlled items in various locations, including some in which Chinese foreign nationals were present.[69] NOAA made a preliminary determination that no deemed export licenses were required, but also submitted this assessment to BIS for a final review. According to NOAA, on February 16, 2006, BIS provided favorable feedback regarding NOAA's inventories and assessment, including NOAA's conclusion that there are no instances where deemed export licenses are needed for any foreign nationals currently working in NOAA facilities. NOAA managers at these locations have reportedly secured their EAR-controlled equipment to prevent foreign national access, pending the implementation of formal access control plans, which were submitted to NOAA's Office of the Chief Administrative Officer on December 12, 2005, for review.[70] According to the hosts we interviewed, none of the Chinese foreign nationals they were hosting had access to EAR-controlled "use" technology.

[69] Officials at one location reported having items controlled under ECCN 4A994 but did not provide a specific count of the items involved. However, they also reported no foreign nationals present at that location.
[70] According to a January 2006 status report in response to our FY 2004 deemed export report, NOAA is formulating a strategy to conduct inventories at its remaining facilities, known as "Priority 2" sites, and intends to carry out those inventories in FY 2006.

Employees involved in the inventory review process attended a two-day, intensive export control training session provided by BIS. Although NOAA has not yet implemented export-control awareness training for all employees, those we interviewed, including those who hosted Chinese foreign nationals or traveled to China, had at least a general awareness of export controls.

NOAA Presentations Reviewed by OIG Appear to Involve Publicly Available Information

NOAA Administrative Order (NAO) 201-32G states that each line office is "responsible for the scientific and technical quality of materials they originate and provide for the scientific review of manuscripts prior to releasing them for publication in NOAA and non-NOAA media." Staff we interviewed said that their managers do review their presentations before they are released to ensure technical accuracy and consistency with NOAA policies. Furthermore, they stated that the information contained in those presentations involved publicly available information; therefore, export controls would not apply. We reviewed several NOAA presentations that had been delivered at public forums in China as part of S&T activities and found that they appear to contain only publicly available information.

Chinese Foreign National Access to NOAA Facilities Appears to Adhere to Departmental Policy

OSY officials at NOAA and Commerce headquarters said that Chinese foreign national visitors and guest researchers are allowed unescorted access into NOAA facilities only after the completion and adjudication of a background investigation. Those who have not been cleared by OSY are required to sign in daily, receive and wear visitor stickers, and be escorted by their respective hosts. According to OSY, one-day foreign national visitors or open conference attendees at NOAA facilities normally are not required to undergo background investigations prior to receiving access because those foreign nationals are supposed to be either escorted by their hosts or prevented by the guard force from accessing areas where only authorized NOAA employees or contractors are allowed. According to OSY, NOAA is complying with the escort requirement; however, due to time constraints, we were unable to verify whether these procedures were being followed for Chinese foreign nationals at NOAA facilities.

SUMMARY OF RECOMMENDATIONS

We recommend that the Under Secretary for Industry and Security ensure that the following actions are taken:

1) We recommend that BIS review the issue to determine whether it warrants regulatory revision, such as the addition of a military "catch-all" provision to the EAR for items that could contribute to the development of conventional weapons but are not specifically controlled for national security reasons, and implement, as appropriate (see page 17).

2) We recommend that BIS develop one consistent policy regarding exports to military end users or for military end uses in China and amend the regulations as necessary to reflect that policy (see page 21).

3) Increase the number of end-use checks that should be conducted in Hong Kong based on past performance (see page 23).

4) Improve the targeting of end-use checks in Hong Kong through (a) adequate upfront research on no-license-required shipments prior to post shipment verification requests, (b) enhanced and continued intelligence sharing between its Office of Export Enforcement and its Office of Enforcement Analysis; and (c) the utilization of intelligence information to help identify appropriate end-use checks (see page 23).

5) Work with the U.S. Census Bureau to modify the Automated Export System to expand the Export Control Classification Number field from the current five-digits to eight-digits (see page 23).

6) We recommend that BIS develop a staffing plan to provide continuity in the stationing of qualified export control officers in Hong Kong and China to avoid interruptions in operations and initiate that plan at least 6 to 12 months before the end of the term of the departing export control officer (see page 29).

7) We recommend that BIS put procedures in place to provide for a technical review of technical documentation submitted by exporters and end users to ensure their compliance with license conditions (see page 33).

8) Review the process of marking and countersigning license applications with Condition 14 to identify and correct any weaknesses to ensure that these license applications are properly entered into Export Enforcement's Followup Subsystem and monitored by the Office of Enforcement Analysis (see page 34).

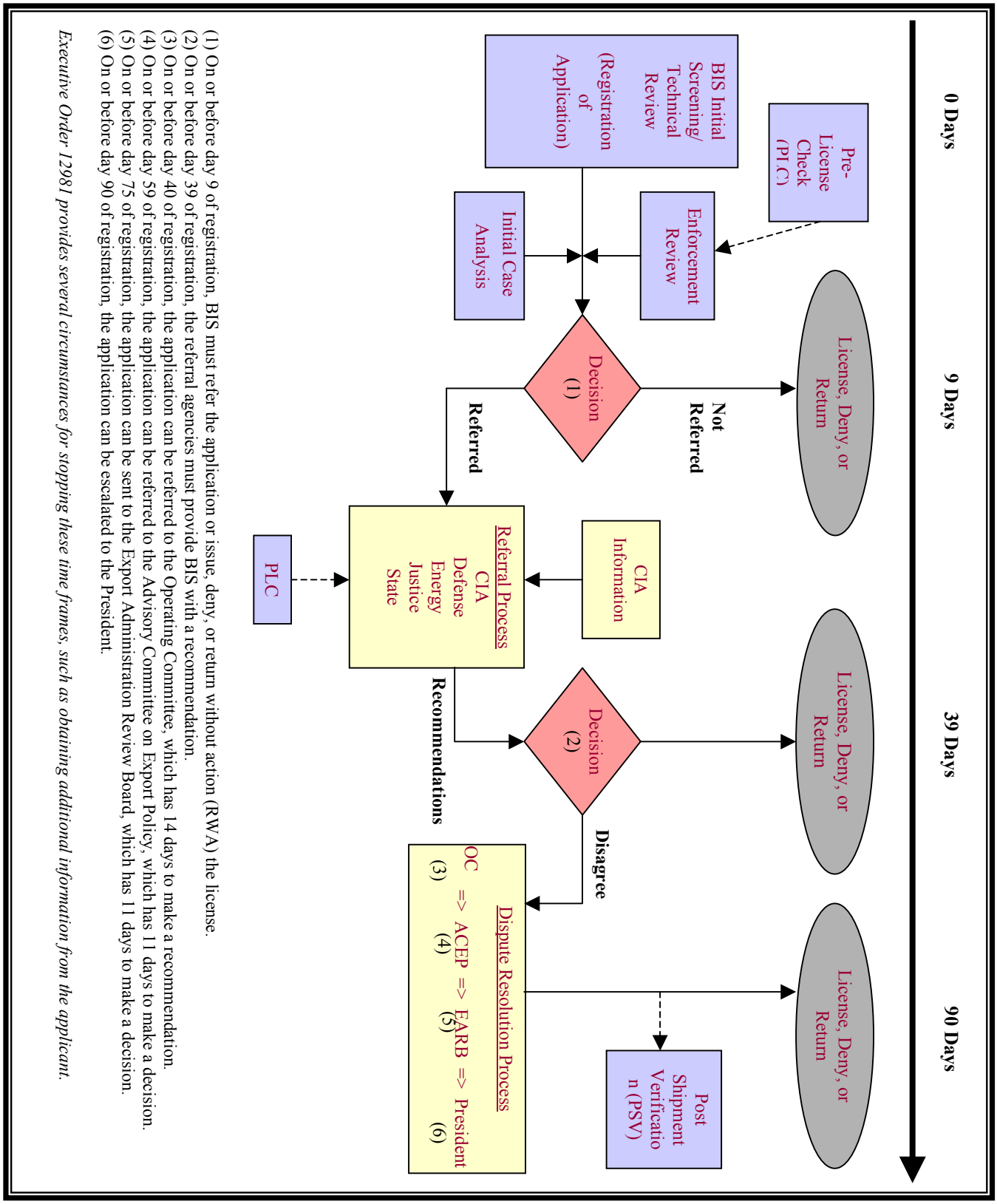
9) Ensure that the Office of Exporter Services promptly forwards to the Office of Enforcement Analysis any copy of a shipper's export declaration that is submitted by an exporter (see page 34).

APPENDICES

Appendix A: Acronyms

ACEP	Advisory Committee on Export Policy
AES	Automated Export System
AT	Anti-Terrorism
BIS	Bureau of Industry and Security
CB	Chemical/Biological
CCL	Commerce Control List
CIA	Central Intelligence Agency
EAR	Export Administration Regulations
ECASS	Export Control Automated Support System
ECCN	Export Control Classification Number
ECO	Export Control Officer
FY	Fiscal Year
IPE	Inspections and Program Evaluations
LO	Licensing Officer
MOFCOM	Ministry of Commerce, People's Republic of China
NDAA	National Defense Authorization Act
NAO	NOAA Administrative Order
NIST	National Institute of Standards and Technology
NLR	No License Required
NOAA	National Oceanic and Atmospheric Administration
NS	National Security
NWS	National Weather Service
OAR	Office of Oceanic and Atmospheric Research
EA	Export Administration
EE	Export Enforcement
OEA	Office of Enforcement Analysis
OC	Operating Committee
OIG	Office of Inspector General
OSY-NIST	(Commerce) Office of Security at NIST
PLC	Pre-License Check
PSV	Post shipment verification
WINPAC	Center for Weapons Intelligence, Nonproliferation, and Arms Control
S&T	Science and Technology
SED	Shipper's Export Declaration

Appendix B: Interagency Dual-Use Export Licensing Process



(1) On or before day 9 of registration, BIS must refer the application or issue, deny, or return without action (RWA) the license.
(2) On or before day 39 of registration, the referral agencies must provide BIS with a recommendation.
(3) On or before day 40 of registration, the application can be referred to the Operating Committee, which has 14 days to make a recommendation.
(4) On or before day 59 of registration, the application can be referred to the Advisory Committee on Export Policy, which has 11 days to make a decision.
(5) On or before day 75 of registration, the application can be sent to the Export Administration Review Board, which has 11 days to make a decision.
(6) On or before day 90 of registration, the application can be escalated to the President.

Executive Order 12981 provides several circumstances for stopping these time frames, such as obtaining additional information from the applicant.

Source: Office of Inspector General

Appendix C: End-Use Checks in China

This appendix classified at the CONFIDENTIAL level
and is available separately from the Office of Inspector General.

Appendix D: Intelligence Sharing Issues for End-Use Check Targeting

This appendix is classified at the SECRET/NOFORN level
and is available separately from the Office of Inspector General.

Appendix E: BIS Management Response

UNITED STATES DEPARTMENT OF COMMERCE
Under Secretary for Industry and Security
Washington, D.C. 20230

March 23, 2006

MEMORANDUM FOR JOHNNIE FRAZIER
INSPECTOR GENERAL

FROM: David H. McCormick

SUBJECT: Response to Audit Report No. IPE-17500/March 2006
Draft Report Date: March 9, 2006
Audited Entity: Bureau of Industry and Security

Attached are the Bureau of Industry and Security's comments addressing the recommendations in the draft report entitled U.S. Dual-Use Export Controls for China Need to Be Strengthened, IPE-17500, March 2006.

There are two attachments to this memo, one unclassified and one classified at the Confidential level, relating to the unclassified report and the two classified appendices. The unclassified attachment describes the steps BIS is already taking or will take to meet the report's recommendations. The classified attachment provides an elaboration on BIS's response to Recommendation 4 and a comment on the classified text.

If you have any questions, please call me at (202) 482-1455.

Attachments

BUREAU OF INDUSTRY AND SECURITY COMMENTS:
U.S. Dual-USE Export Controls for China Need to be Strengthened
Draft Inspection Report No. IPE-17500, March 2006

Part I – Response IG Recommendations

Prior to publication of this report, the Bureau of Industry and Security (BIS) had already and independently taken steps to meet many of the report's recommendations. BIS will also begin steps to meet the remaining recommendations.

Recommendation 1: We recommend that BIS review the issue [of changing the regulations to permit denial solely on the basis of military end-use if the exported item or technology is not controlled for NS reasons] to determine whether it warrants regulatory revision, such as the addition of a military "catch-all" provisions to the EAR for items that could contribute to the development of conventional weapons but are not specifically controlled for national security reasons (see page 17).

BIS Response: BIS has completed its review of the issue and incorporated the results in a draft rule that BIS is preparing in order to implement with respect to China the Wassenaar Statement of Understanding regarding exports to countries subject to arms embargoes. BIS anticipates final interagency agreement on the draft rule and publication in proposed form for public comment by late spring 2006.

Recommendation 2: We recommend that BIS develop one consistent policy regarding exports to military end users or for military end uses in China and amend the regulations as necessary to reflect that policy (see page 21).

BIS Response: The draft rule referred to in the response to Recommendation 1 will also address this issue.

Recommendation 3: Reevaluate the number of end-use checks that should be conducted in Hong Kong based on past performance (see page 23).

BIS Response: BIS generally agrees with this recommendation and is already taking steps consistent with it. For example, on December 15, 2005, BIS's Export Enforcement reassigned an analyst to assist on Hong Kong end-use check targeting. In addition, the upcoming reorganization of BIS's Office of Enforcement Analysis (OEA), including the selection of an SES-level director, will result in an increase in the quantity and quality of BIS resources supporting license reviews and end-use checks.

Quality is as important as quantity in selecting end-use checks. It is important to target and select meaningful end-use checks that provide BIS with the most targeted and relevant information possible to assist in making licensing decisions or in detecting potential diversions to unauthorized end-uses or end-users. Therefore, BIS focuses on the quality of checks to ensure maximum security benefit.

The report also highlights a limitation BIS faces in targeting and selecting meaningful post-shipment verifications (PSVs) in Hong Kong due to the lack of sub-paragraph Export Control Classification Number (ECCN) information in the Automated Export System. BIS's response to this constraint is detailed below in response to Recommendation 5.

Recommendation 4: Improve the targeting of end-use checks in Hong Kong through (a) adequate upfront research on no-license-required shipments prior to post shipment verification requests, (b) enhanced and continued intelligence sharing between its Office of Export Enforcement and its Office of Enforcement Analysis; and (c) the utilization of intelligence information to help identify appropriate end-use checks (see page 23).

BIS Response: BIS agrees with the IG recommendation and is already taking steps to improve targeting of end-use checks. Based on feedback received during a conference with all BIS Export Control Officers (ECOs) in Washington, D.C., in October 2005, Export Enforcement revised its overall targeting and selection of end-use checks to the locations where our ECOs are located, including Hong Kong.

In addition, the upcoming reorganization of OEA is designed in part to improve coordination between OEA and the Office of Export Enforcement (OEE) on sharing intelligence information which will help to identify appropriate end-use checks in Hong Kong and elsewhere. To this end, and prior to the formal completion of the reorganization, OEA and OEE began joint weekly meetings in December 2005 to review all available export control intelligence information to ensure maximum coordination between the two offices.

Please see the Confidential attachment for additional comments on this recommendation.

Recommendation 5: Work with the U.S. Census Bureau to determine the applicability and costs associated with modifying the Automated Export System to expand the Export Control Classification Number field from the current five-digits to eight-digits (see page 23).

BIS Response: BIS agrees with the IG recommendation and is already taking steps to fill this gap. BIS is drafting the regulatory changes necessary to implement this recommendation and will soon publish an Advance Notice of Proposed Rule Making in the Federal Register to solicit comments from industry on the impact of expanding Automated Export System fields. BIS will also consult with the Census Bureau in developing this regulation.

Recommendation 6: We recommend that BIS develop a staffing plan to provide continuity in the stationing of qualified export control officers in Hong Kong and China to avoid interruptions in operations and initiate that plan at least 6 to 12 months before the end of the term of the departing export control officer (see page 28).

BIS Response: BIS agrees with this IG recommendation. OEE will specifically include as one of the critical elements of the performance plan for the OEE coordinator for BIS ECOs a requirement to coordinate and prepare the necessary vacancy announcements 6 to 12 months prior to the end of each ECO's assignment.

However, it is important to note that no staffing plan can cover every contingency. BIS currently has fewer than 400 personnel, so is unlikely to be able to create a ready pool of language-qualified ECOs that can be deployed on short notice. Thus, it is reasonable to assume that, despite the best efforts of BIS, gaps in ECO coverage will occasionally occur. In order to minimize the impact of such gaps, BIS will ensure that there is coverage in place in case of such a vacancy.

Recommendation 7: We recommend that BIS put procedures in place to provide for a technical review of technical documentation submitted by exporters and end-users to ensure their compliance and license conditions (see page 31).

BIS Response: BIS agrees that there may be instances where technical review of documentation submitted pursuant to a license condition is warranted. BIS plans to complete an internal assessment by May 12, 2006, to determine the appropriate process for conducting these reviews.

Recommendation 8: Review the process of marking and countersigning license applications with Condition 14 to identify and correct any weaknesses to ensure that these license applications are properly entered into Export Enforcement's Follow-up Subsystem and monitored by the Office of Enforcement Analysis (see page 32).

BIS Response: On March 16, 2006, BIS issued guidance to Licensing Officers and Counter Signers reminding them of the proper procedures for marking Condition 14 and other Standard Conditions. A copy of that guidance is attached.

Recommendation 9: Ensure that the Office of Exporter Services promptly forwards to the Office of Enforcement Analysis any copy of a shipper's export declaration that is submitted by an exporter (see page 32).

BIS Response: On March 16, 2006, the Operations Support Division (OSD) of Export Enforcement's Office of Exporter Services was issued guidance requiring staff to forward Shipper's Export Declaration/Automated Export System (SED/AES) documents to OEA within 48 hours of receipt. OSD was also instructed to place a copy of the documents and the transmittal memo in the Multipurpose Archival Records Retrieval System (MARRS), which is the permanent record retention system for documents related to export applications and classifications. A copy of this guidance is attached.

Appendix F: NOAA Management Response

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
CHIEF ADMINISTRATIVE OFFICER

MAR 27 2006

MEMORANDUM FOR: Jill Gross
Assistant Inspector General for Inspections and Program Evaluations

FROM: William F. Broglie
Chief Administrative Officer

SUBJECT: NOAA's Comments to the Office of Inspector General's (OIG) Draft Report—*Bureau of Industry and Security: U.S. Dual-Use Export Controls for China Need to Be Strengthened*
Draft Report No. IPE-17500/March 2006

Thank you for the opportunity to comment on the OIG draft report on China export controls. Attached are the comments from the National Oceanic and Atmospheric Administration.

Attachment

NOAA Comments on the Draft OIG Report Entitled
"Bureau of Industry and Security:
U.S. Dual-Use Export Controls for China Need to be Strengthened"
(IPE-17500/March 2006)

General Comments

Thank you for the opportunity to review and comment on the Office of Inspector General (OIG) draft report on China export controls. The National Oceanic and Atmospheric Administration (NOAA) agrees with the OIG overall findings and recognizes the continued need to heighten awareness within its research community to ensure compliance with the Export Administration Regulations (EAR). NOAA appreciates the OIG's recognition that NOAA has made progress in fulfilling the recommendations made in their March 2004 deemed export report. NOAA is committed to continued progress in this area and to collaborating with both the Bureau of Industry and Security (BIS) and the National Institute of Standards and Technology (NIST) where applicable.

Recommended Changes for Factual/Technical Information

Cover letter to Vice Admiral Conrad C. Lautenbacher, Jr.;
Executive Summary, Page V, first full paragraph, line 6;
and
Page 38, second full paragraph, line 7:

The OIG draft report noted, in the three instances above, that the BIS has not completed its review of NOAA's preliminary assessment. However, on February 16, 2006, BIS provided favorable feedback regarding NOAA's inventories and assessment, including NOAA's conclusion that there are no instances where deemed export licenses are needed for any foreign nationals working in NOAA facilities.

Page 37, second paragraph, last line:
Amend sentence as follows: ". . . through activities such as lectures, **(insert)** collaborative projects, and participation in workshops and conferences."

Page 37, third paragraph, second line:
Amend sentence as follows: "The first protocol, with the China Meteorological Administration, is managed **(insert)** on the U.S. side by the National Weather Service. . ."

Page 37, third paragraph, third line:
Amend sentence as follows: "The second protocol, with China's State Oceanic Administration, is managed **(insert)** on the U.S. side by the Office of Oceanic and Atmospheric Research. . ."

Editorial Comments
None.

NOAA Response to OIG Recommendations
This report contains no recommendations for NOAA.

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