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Report to the Committee on the Judiciary, House of Representatives

December 2006

EXPORT CONTROLS

Agencies Should Assess Vulnerabilities and Improve Guidance for Protecting Export-Controlled Information at Universities

GAO-07-70

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Highlights

Highlights of GAO-07-70, a report to the Chairman, Committee on the Judiciary, House of Representatives

Why GAO Did This Study

Foreign students and scholars have made substantial contributions to U.S. research efforts and technology development. However, according to a federal government intelligence assessment, foreign access to sensitive U.S. technology has imposed a significant but unquantifiable cost to the United States.

Given this risk, GAO was asked to (1) describe the nature of the research at universities and identify steps they take to comply with export controls and (2) assess efforts by the Departments of Commerce and State—the key export control agencies—to determine the risk of export violations in university research. GAO reviewed Commerce and State export control programs and met with officials from 13 universities, selected based on their foreign student populations, applications for export licenses, and federal grants and contracts.

What GAO Recommends

GAO recommends that Commerce and State use available information to assess potential vulnerabilities and based on this assessment improve outreach, guidance, and interagency coordination. The agencies generally concurred, but State disagreed with our recommendation on assessing vulnerabilities. Broader assessments would increase State's knowledge of risks and help improve its guidance to universities.

www.gao.gov/cgi-bin/getrpt?GAO-07-70.

To view the full product, including the scope and methodology, click on the link above. For more information, contact John Hutton at (202) 512-7773 or huttonj@gao.gov.

What GAO Found

The U.S. export control system requires export licensing for defense items and items that have both commercial and military applications, except where exclusions apply, such as those applicable to universities in some circumstances. The U.S. export control agencies place the onus on universities to understand and comply with the regulations. According to university officials we interviewed, their institutions focus almost exclusively on fundamental research—defined as basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community. Such research is generally not subject to export controls. Universities we visited conduct research in such areas as nanotechnologies, computer security, and chemical engineering. To ensure their research remains in the public domain, university officials said they negotiate contract language to remove publication or other dissemination restrictions for research they consider to be fundamental. If export controls apply, university officials stated they sometimes involve only those students eligible to conduct the research under a license exclusion, to avoid the lengthy license application process. In other cases, they refer such work to off-campus associated facilities that can better regulate and control foreign national access to the research. Universities we visited indicated that government-provided training and guidance on export control regulations is limited in informing their efforts to manage and protect export-controlled information in the university environment.

State and Commerce officials expressed concerns that universities may not correctly interpret and apply export regulations, given the large number of foreign students participating in research at universities and the relative lack of license applications from universities. Although federal internal control standards contain guidelines for agencies to conduct risk assessments, State and Commerce have not conducted an overall assessment of available trend data on technology development research and foreign participation in such research at U.S. universities to identify potential vulnerabilities. For example, U.S. government agencies collect data on foreign student nationality, school enrollment, and types of research conducted at universities for federal agencies, which could supplement information that State and Commerce receive from visa application processes and other sources. Although State and Commerce provide guidance through training seminars, agency Web sites, and telephone help desks to assist exporters in understanding and complying with regulations, officials stated that their focus is on processing export license applications—primarily from industry. Recently, Commerce established an advisory committee composed of industry and university representatives who are expected to discuss issues such as the nature of university research and its relation to export controls.

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Abbreviations

BIS	Bureau of Industry and Security
DDTC	Directorate of Defense Trade Controls
DOD	Department of Defense
EAR	Export Administration Regulations
ITAR	International Traffic in Arms Regulations
NASA	National Aeronautics and Space Administration
SEVIS	Student and Exchange Visitor Information System

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Accountability * Integrity * Reliability

United States Government Accountability Office
Washington, DC 20548

December 5, 2006

The Honorable F. James Sensenbrenner, Jr.
Chairman
Committee on the Judiciary
House of Representatives

Dear Mr. Chairman:

U.S. national security and economic interests are heavily dependent on technological innovation and advantage. Many of the nation's leading-edge technologies, including defense-related technologies, are being discovered by American and foreign national students and scholars in U.S. university research and university-affiliated laboratories. As the Department of Defense (DOD) invests less and less of its funding on in-house research and development, university-based discoveries are becoming increasingly vital to national security and other U.S. interests.

To mitigate the risk of technology and knowledge falling into the wrong hands, the U.S. government—primarily the Departments of State and Commerce—controls the transfer of defense and "dual use" information.[1] However, controlling the transfer of such information presents special challenges. U.S. export control regulations allow foreign students and researchers without export licenses to partake in fundamental research, defined to mean basic and applied research in science and engineering, the results of which are ordinarily published and shared broadly within the scientific community.[2] U.S. policymakers recognize that foreign students and researchers have made substantial contributions to U.S. research efforts, but the potential transfer of knowledge of controlled defense-

[1] Dual-use information is that which has both commercial and military application. 15 C.F.R. Sec. 730.3.

[2] National Security Decision Directive 189, issued September 21, 1985, and still in effect, established national policy for controlling the flow of science, technology, and engineering information produced in federally-funded fundamental research at colleges, universities, and laboratories. The directive defines fundamental research to mean basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community, as distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary or national security reasons.

related technologies to their home countries could have significant consequences for U.S. national interests. In a September 2005 testimony before Congress, the National Counterintelligence Executive stated that while the vast majority of foreign students in the United States are legitimately studying and advancing academic pursuits, some seek to acquire sensitive U.S. technologies to advance their own countries' economic and military interests. Additionally, while not limited to foreign students, a 2005 federal report noted that the technology lost as a result of foreign efforts to target sensitive U.S. technologies has imposed a significant, but difficult to quantify, cost on the United States.[3]

On the basis of your interest in continuing to attract foreign students and researchers to U.S. universities while protecting export-controlled information, you asked us to look at how academic institutions and the U.S. government protect against the illegal disclosure of such information. In response, we (1) described the nature of the research conducted at universities and identified the steps they have taken to comply with government export control regulations and (2) assessed the efforts of the Departments of Commerce and State to determine the risk of export violations in university research.

To conduct our work, we met with officials from the Departments of Commerce and State and analyzed their regulations, guidance, and training. We also met with officials in the Department of Defense—which participates in the export control regulatory process—and the Department of Homeland Security—which has responsibility for tracking foreign students and scholars during their course of study in the United States. We visited 13 universities that were systematically selected based on their international student populations, export license applications, and federal grants and contracts. At the universities, we spoke with officials in such positions as vice chancellor for research, director of compliance, and general counsel, among others. While our selection criteria included a range of university experiences with export controls and foreign students and scholars, the universities' views stated in this report do not represent the entirety of the U.S. academic community. We also spoke with officials from various research institutes and academic associations. Additional

[3] Office of the National Counterintelligence Executive, *Annual Report to Congress on Foreign Economic Collection and Industrial Espionage—2004*, NCIX 2005-10006, (Washington, D.C.: April 2005).

details on the scope and methodology of our review can be found in appendix I. We conducted our review from March through November 2006 in accordance with generally accepted government auditing standards.

Results in Brief

According to university officials we interviewed, their institutions focus almost exclusively on fundamental research, which is generally not subject to export controls. By conducting fundamental research in areas such as artificial intelligence, nanotechnology, and robotics, universities can openly share and publish their research findings within a broad community that includes international students and scholars. To ensure their research remains in the public domain, most university officials said they extensively screen and review potential contracts and grants for fundamental research to ensure there are no publication or other dissemination restrictions. If export controls apply, university officials stated they sometimes reject the research contract, involve only students and scholars who can conduct the research under license exclusions, or refer such work to associated facilities and laboratories located off-campus that can better regulate and control foreign national access to such research. The U.S. export control system relies on universities to understand and correctly determine when export regulations apply and to follow the regulations accordingly. To educate themselves on export control issues, academic officials take training courses offered through Commerce, State, and university associations; search government and other Web sites; request guidance from knowledgeable officials at other universities; and hire outside legal counsel and expertise on export controls. However, the universities we visited indicated that government-provided training and guidance on export regulations is limited in informing their efforts to manage and protect export-controlled information, and it does not clarify when fundamental research exclusions should apply.

Although State and Commerce provide some guidance and training to assist exporters in understanding and complying with export regulations, these agencies have not fully assessed the potential for transfers of export-controlled information to foreign nationals in the course of U.S. university research. State and Commerce target their resources to processing license applications and provide assistance to exporters through guidance, training, and other outreach. However, they rarely coordinate these efforts or strategize their outreach on export controls to the academic community. Furthermore, officials expressed concerns that universities may not correctly interpret and apply export regulations—a concern raised by the rarity of export license applications from U.S. academic

institutions, considering the large foreign student and scholar populations studying and conducting research in the United States. However, the agencies have not conducted an overall assessment of available data on foreign participation in research at U.S. universities to determine whether such research would require export protections. For example, U.S. government agencies collect data on foreign student nationality, school enrollment, and federally-funded research conducted at universities, which could supplement information that State and Commerce receive from visa application processes and other leads. Furthermore, State and Commerce outreach efforts have been largely reactive, and they have only recently begun to engage with the affected research community in forums to promote dialogue on issues such as fundamental research and its relation to export controls.

To improve their oversight of export-controlled information at universities, we are recommending that the Secretaries of Commerce and State direct their export control entities to strategically assess potential vulnerabilities in the conduct and publication of academic research through analyzing available information on technology development and foreign student populations at universities. This could help to determine the extent to which research at universities may be subject to export controls. Furthermore, we recommend that, on the basis of this assessment, Commerce and State further coordinate efforts and improve guidance and outreach to ensure that universities understand when to apply export controls.

The Department of Commerce generally agreed with our report and indicated that it has undertaken efforts to increase its outreach to the academic community and plans to further assess vulnerabilities and more precisely target outreach and compliance efforts. The Department of State agreed with our recommendation to improve interagency coordination on training and guidance for universities and disagreed with our report's finding that it does not assess the potential vulnerabilities associated with export-controlled information at academic institutions. However, we maintain that a trend analysis of available data on foreign students and scholars and federal contracts for research at academic institutions would be a valuable investment in providing a proactive plan for targeting outreach and training for the academic community. While State disagreed with our recommendation, in its response it noted that it is considering conducting such an assessment. In addition, the Departments of State and Homeland Security provided technical comments that were incorporated as appropriate throughout the report. The Department of Defense had no comments on this report.

Background

In November 2003, GAO reported that university research is a vital part of the nation's research and development efforts, primarily funded by the federal government because of the broad consensus that university research is a long-term national investment in the future.[4] The federal investment in university research has yielded thousands of inventions each year that have fostered the development of new technologies, stimulated the creation of new jobs, and improved the quality of life. These benefits come through open communication among scientists and the sharing of research results. A National Academy of Sciences official underscored the importance of this issue in September 2005 congressional testimony, stating that over 55 percent of the engineering Ph.D. students in the United States are foreign-born and that their research helps strengthen the United States in the fastest-moving new technologies, some of which have potential defense-related application.[5]

Foreign students and scholars bring needed skills to our increasingly knowledge-based economy, build bridges to other countries and professional communities, and make other valuable contributions to our society. These contributions are particularly important for maintaining our competitiveness, fostering productivity and innovation, and strengthening our workforce. While the United States has long been a global leader in higher education and one of the most desired destinations for foreign students, international competition for the best and the brightest students and scholars is growing. Countries such as China have improved their educational capacities, possibly decreasing the incentives for students and scholars to study in the United States. The recent slowing of foreign student enrollment in United States universities and colleges has raised concerns about the extent to which we will be able to continue attracting talented foreign students and researchers to our universities and to our workforce after they graduate while also maintaining our nation's security.

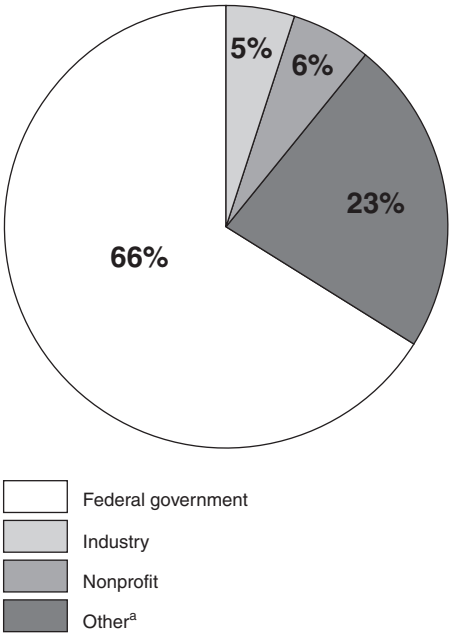
Recognizing the importance of balancing national security interests with the need to allow the free exchange of information at U.S. academic institutions of higher learning, the federal government is a major funding

[4] GAO, *University Research: Most Federal Agencies Need to Better Protect against Financial Conflicts of Interest*, GAO-04-31 (Washington, D.C., Nov. 14, 2003).

[5] House of Representatives Committee on the Judiciary, Subcommittee on Immigration, Border Security, and Claims, *Hearing on Sources and Methods of Foreign Nationals Engaged in Economic and Military Espionage*, Serial No. 109-58, (Washington, D.C., Sept. 15, 2005).

source for research conducted at U.S. universities and colleges. In fiscal year 2003, the federal government funded almost two-thirds—approximately $29.6 billion—of all basic and applied research funding provided to universities and colleges by external sources (see fig. 1). Other sources of funding come from industry, nonprofit organizations, as well as state and local governments.

Figure 1: Basic and Applied U.S.-Based Research Funding Sources for Universities and Colleges in Fiscal Year 2003



Source: National Science Foundation data, GAO analysis.

[a]"Other" includes universities, colleges, and state and local governments.

According to National Science Foundation data for fiscal year 2003, the National Institutes of Health of the Department of Health and Human Services funded approximately 62 percent (about $14.1 billion) of all federally funded science and technology research conducted by universities and colleges. Other federal research funding sources identified by university officials we spoke with include the National Aeronautics and Space Administration (NASA); the National Science Foundation; various Department of Defense agencies, including the Navy and the Defense Advanced Research Projects Agency; and the Departments of Energy, State, and Transportation. This level of government funding was consistent with that of several of the universities we visited, where

officials stated that their research is primarily funded by government grants and contracts, including contracts that are directed toward industry and subsequently subcontracted, or "flowed through," to universities.

Over the past several decades in which the current export control system has been in effect, the global economy has changed significantly. DOD continues to seek innovative technologies to meet the needs of warfighters and to counter technologies developed by potential U.S. adversaries. To achieve these ends, DOD has become more willing to rely on the nondefense industry to supply its needs. DOD increasingly relies on commercial research, for areas such as information systems and telecommunications, where the cutting edge of technological advancement lies. Such advances in communications technology have been made possible to a large extent by basic research, much of which was initially developed in universities and often involved foreign students and scholars.

The U.S. export control system relies on the ability of exporters to recognize when certain goods and services meet the criteria for requiring an export license. The system is primarily divided between two regulatory regimes, one managed by the Department of State and another managed by the Department of Commerce. The regimes require export licensing for defense-related items and information, including data, except where exclusions apply. Both regulatory regimes include exclusions applicable in some circumstances to universities and other academic institutions of higher learning. The U.S. export control system places the onus on universities and other exporters to understand and comply with the export control regulations.

The Department of State Directorate of Defense Trade Controls (DDTC) manages defense items through the International Traffic in Arms Regulations (ITAR).[6] State issues export licenses based on the U.S. Munitions List, which identifies defense articles, services, and related technical data that are controlled for export. Moreover, the regulations

[6] The ITAR (22 C.F.R.§§ 120-130) implements the Arms Export Control Act (22 U.S.C. 2778). The Act authorizes the President to control the export of defense articles and services and promulgate corresponding regulations, which has been delegated to the Secretary of State by Executive Order 11958, as amended. The ITAR defines fundamental research to mean basic and applied research in science and engineering where the resulting information is ordinarily published and shared broadly within the scientific community, as distinguished from research, the results of which are restricted for proprietary reasons or specific U.S. government access and dissemination control. 22 C.F.R. sec.120.11 (a)(8).

state that unless otherwise expressly exempted or excluded, an export license is required for the oral, visual, or documentary transmission of technical data by U.S. persons to foreign persons,[7] by such means as in-person or telephone discussions and written correspondence including electronic messages, even when they are in the United States. The U.S. Munitions List contains 21 categories, covering items such as weapons, chemical and biological agents, missiles, and both commercial and military satellites.

The Department of Commerce's Bureau of Industry and Security (BIS) manages dual-use items, having both military and commercial applications, through the Export Administration Regulations (EAR).[8] Under these regulations, exporters are to obtain prior government authorization in the form of a license from BIS, or determine that a license is not needed, before exporting dual-use items. Commerce requires an export license for the release of technology or software source code to a foreign national[9] because such a release is deemed to be an export[10] to the

[7] The ITAR defines a foreign person as any natural person who is not a lawful permanent resident as defined by 8 U.S.C. sec. 1101(a)(20) or who is not a protected individual as defined by 8 U.S.C. 1324b(a)(3). It also means any foreign corporation, business association, partnership, trust, society, or any other entity or group that is not incorporated or organized to do business in the United States, as well as international organizations, foreign governments, and any agency or subdivision of foreign governments (e.g., diplomatic missions).

[8] The EAR (15 C.F.R. §§ 730-774) implements the Export Administration Act (50 U.S.C. 2401-2420). Although the Act has lapsed, export regulations have been extended through executive orders, of which Executive Order 13222 (August 17, 2001) is the most recent. The EAR, like National Security Decision Directive 189, defines fundamental research to mean basic and applied research in science and engineering where the resulting information is ordinarily published and shared broadly within the scientific community. Such research can be distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary reasons or specific national security reasons. 15 C.F.R. sec.734.8.

[9] The EAR defines a foreign national as a person who is not lawfully admitted for permanent residence in the United States or a person who is not a protected individual under the Immigration and Naturalization Act, 8 U.S.C. 1324b(a)(3). 15 C.F.R. sec.734.2 (b)(2)(ii).

home country or countries of the foreign national, even if the person is in the United States. Commerce regulates the dual-use items specified in the EAR's Commerce Control List, which are controlled for a variety of reasons, including restricting exports that could significantly enhance a country's military potential, preventing exports to countries that sponsor terrorism, and limiting the proliferation of chemical, biological, and nuclear weapons and their delivery systems. The Commerce Control List has 10 categories covering items such as electronics, computers, telecommunications, and avionics.

Universities Focus on Fundamental Research to Comply with Export Regulations

Most of the universities we visited aim to ensure that their research remains unrestricted and in the public domain by conducting fundamental research, which is generally excluded from export controls. To ensure that most of the research conducted on their campuses does not require an export license, these universities negotiate to exclude any restrictions on publishing and disseminating the results of the research they consider to be fundamental. For research that may be subject to export control regulations, the universities we visited have taken steps to ensure that their personnel are informed about and comply with these regulations.

Universities Focus on Conducting Fundamental Research

According to most university officials, their institutions conduct basic and applied science and engineering research in a wide variety of areas, producing findings that are conducted, shared, and published openly within a broad community that includes international students and scholars. Table 1 lists examples of research areas conducted at universities that we visited.

[10] These transfers are commonly referred to as "deemed" exports. Commerce's export control regulations (15 CFR 734.2(b)(2)(ii)) specifically utilize the term "deemed export" to describe these transfers. While the ITAR does not use a precise corresponding term, State Department officials told us the concept of a "deemed" export is covered under the ITAR's general definition of an export—that is, an export means "disclosing (including oral or visual disclosure) or transferring technical data to a foreign person, whether in the United States or abroad" (see 22 C.F.R. Sec. 120.17), and the ITAR's requirements for the export of unclassified technical data, which state "a license is required for the oral, visual or documentary disclosure of technical data by U.S. persons to foreign persons…regardless of the manner in which the technical data is transmitted (e.g., in person, by telephone, correspondence, electronic means, etc.)" (see 22 C.F.R. Sec. 125.2(a) and (c)). State officials told us they also refer to these transfers as "deemed exports."

Table 1: Examples of Research Areas Conducted at Universities Visited by GAO

• Artificial intelligence
• Atmospheric research
• Biological sciences
• Chemical engineering
• Computational science and computer architecture
• Computer security
• Integrated circuit design and fabrication
• Internet communications and advanced networking
• Nanotechnologies
• Physics
• Remote sensing of Earth
• Robotics

Source: GAO analysis of universities' Web sites.

Most officials we spoke with stated that their universities specifically seek out research contracts and grants that do not restrict their ability to conduct fundamental research by extensively screening and reviewing the terms of potential contracts and grants. If a contract includes restrictions on fundamental research, some universities attempt to negotiate the restrictive language out of the contract. Some university officials noted that such negotiations have become more frequent because government and industry contracting officials are increasingly inserting restrictive language in contracts for research that universities consider to be fundamental. For example, according to university officials, DOD agencies sometimes insert standard acquisition regulations language that prohibits the contractor from releasing information, even unclassified information, outside of the contractor's organization.[11] According to university officials, a rule proposed by DOD would have restricted universities from sharing information with other academic institutions and publishing research or

[11]Defense Federal Acquisition Regulation 252.204-7000 prohibits the contractor from releasing any unclassified information to anyone outside of the contractor's organization unless the contracting officer has given prior written approval or the information is otherwise in the public domain before the date of release.

otherwise making such information available in the public domain.[12] DOD revised the rule to minimize the impact on fundamental research conducted at universities and acknowledged that the free exchange of ideas is a foundational concept of U.S. research and educational institutions.[13] Several universities we interviewed stated that if they are unsuccessful in negotiating the restrictive language out of those research contracts they consider to be fundamental, they sometimes reject the opportunity to participate in the research.

For research subject to export control restrictions, universities may modify the way the research is conducted to avoid the export license application process—a process some officials characterized as time-consuming and complicated. For example, officials at one university said that instead of applying for an export license for one project, they opted to use only researchers who are excluded from export license requirements, such as U.S. citizens or foreign nationals with permanent residency status. In other cases, university officials stated they move export-controlled work to off-campus facilities and laboratories administered by the universities or the entity sponsoring the contract, where such research can be better segregated and controlled. At the six university-administered laboratories that we visited, each used access control systems such as badges and computer passwords. Such restrictions limiting access to information at laboratories are not as common on the main campuses we visited, where research information is more openly available.

Efforts Undertaken by Universities to Understand and Comply with Export Control Regulations

According to a State official, U.S. export control regulations are designed for "self-compliance." For the academic community specifically, State officials said that it is the universities' responsibility to conduct due diligence to determine whether their research activities are subject to export laws, and to identify whether an export license is required for foreign nationals within their purview. University officials we spoke with

[12]In 2005, DOD issued a proposed regulation that would have required contract officers to ensure that contracts identify any export-controlled information and technology and the contractor to not allow access by foreign nationals or persons to export-controlled information and technology without obtaining an export license, other authorization, or exemption. According to university associations, they were concerned that application of this regulation by contracting officers would not take into consideration whether export-controlled information is involved when restricting universities from sharing the results of fundamental research.

[13]At the time of this report, the revised rule (2004-D010) had not been finalized.

have taken actions to become educated on complex export control regulations—an undertaking that several officials indicated requires an extensive time commitment because the government does not provide sufficient guidance. Some universities have also dedicated other resources to ensure they comply with U.S. export control laws, such as hiring legal counsel.

To understand export control regulations, universities we visited frequently rely on agency training and guidance. Several university officials stated that they had attended training seminars sponsored by Commerce, as well as conferences sponsored by the Society for International Affairs, a nonprofit defense trade industry association that sponsors events such as conferences and workshops to educate and instruct the export community on all aspects of defense and commercial exports and technology transfers.[14] Most university officials indicated that they also accessed Commerce and State Web sites or their respective telephone help desks.

However, several university officials indicated that the agency training and guidance have limited utility for academic institutions. For example, according to some university officials, training provided by Commerce and State does not discuss how export regulations apply to universities that have fundamental research exclusions. One university official characterized the Commerce-sponsored session that he attended as being "entry level" training directed at the corporate community. Commerce officials have acknowledged that about 95 percent of the attendees at their seminars are repeat attendees, primarily from industry. Some university officials stated that the training was too narrowly focused on topics that do not pertain to universities. University officials also raised concerns with State's and Commerce's Web-based guidance. Some university officials characterized the Web-based information provided by Commerce and State as being unclear or only providing a general introduction to a topic without providing sufficient details to fully answer questions concerning export controls. For example, a university official stated that the Commerce and State Web sites do not identify which forms universities need to submit in seeking export licenses to involve foreign researchers in certain research. Also, although some university officials

[14] The Society for International Affairs is a volunteer, nonprofit, educational organization jointly formed in 1967 by the federal government and industry. Its purpose is to serve as a forum for the exchange of information—through events such as luncheons, conferences, and workshops—related to export and import licensing issues.

indicated that Commerce and State officials provide very useful information via the telephone help desks, they stated that getting immediate help was difficult at times and that return messages were untimely.

To further their understanding of export control regulations, several universities have sought out other sources of information, specifically sources tailored to universities. Several university officials indicated that they rely on best practices by other universities that have shared and developed approaches for addressing different export control issues, including the Massachusetts Institute of Technology, Stanford University, and the Universities of Oklahoma and Maryland. For example, officials from one university said that they have relied on other universities for guidance on applying for export licenses. Universities and academic associations exchange best practice information through seminars and workshops sponsored by nongovernmental organizations, such as the Association of American Universities, the Council on Governmental Relations, and the National Council of University Research Administrators.

Many of the universities that we visited have also developed written guidance and training to help educate university personnel on their responsibility to comply with the export control regulations. For example, officials from one university we visited have developed a Web-based decision tree to assist university personnel in determining the applicability of export controls to their research projects. Officials from another university stated that their research institution requires that all staff take training—available on the university's intranet site—related to the handling of controlled information. Another university adopted a targeted strategy of export control education for its researchers, reaching out to the researchers and programs most likely to be affected by export controls, such as those in engineering.

A number of universities we visited have invested in other resources to ensure they comply with export control regulations. Some hire outside legal counsel who specialize in export controls. For example, one university routinely employs outside counsel to mitigate the risk of committing violations, because of the severity of the penalties for noncompliance.[15] According to officials at another university, thousands of

[15] The EAR and ITAR both impose criminal and civil penalties.

dollars are spent each year for legal services addressing export controls. Finally, two universities we visited use a software program to help determine if a proposed research project grant or contract is subject to export license requirements. According to officials at these two universities, the software program helps to facilitate a process that is very difficult, time-consuming, and costly because of the length and complexity of U.S. export control regulations.

State and Commerce Have Not Assessed the Potential Risk to Export-Controlled Information at Universities

State and Commerce officials indicated that their top priority is processing the thousands of license applications received annually—the vast majority of which are from industry—leaving few resources for guidance and outreach to exporters. However, they expressed concerns that universities may be misinterpreting their responsibilities under export regulations and that the potential may exist for foreign nationals to access sensitive information on U.S. campuses. Despite these concerns, neither agency has analyzed available information on university research and foreign student populations to determine the potential risk of the illegal transfer of controlled information.

Commerce and State Prioritize Processing of License Applications and Target Their Resources to Industry

According to Commerce officials, BIS receives approximately 1,000 deemed export license applications per year. Officials confirmed that most of these applications are received from industry. For example, Commerce officials stated that of the 865 deemed export licenses processed by Commerce in fiscal year 2006, 99.7 percent were from industry. These same officials noted that over the last few years, only two universities have submitted deemed export license applications. A 2004 Commerce Inspector General report stated that license application data suggest that many industries (including chemical and biotechnology industries), academic institutions, and federal research facilities that may employ or host foreign nationals are not applying for deemed export licenses.

State and Commerce officials stated that beyond processing export licenses, few resources remain for providing outreach and guidance to the export community. While both agencies provide guidance and outreach through conferences cosponsored with other organizations and agency-sponsored training, much of their outreach is directed at industry, and not the academic community. Commerce cosponsors approximately 45 formal seminars annually, along with specialty seminars on deemed exports ranging from basic to advanced. As its principal training activity, State provides speakers for export licensing conferences that are organized by the Society for International Affairs and tailored to the needs of industry

and government participants. An official acknowledged that State is unable to fill all of the speaking requests that it receives, which number in the hundreds each year. Instead, State responds to requests based on the availability of personnel and travel funds. From January 2004 through June 2006, State officials approved their personnel to participate in approximately 135 outreach activities and events.

Officials at both agencies indicated that their visits to or staffing of training seminars for the academic community are often in response to specific invitations from universities. A State official who is responsible for export outreach reported that since 2003, only one event has been held that was specifically targeted to the academic community. While State policy officials have indicated that they would like to conduct more conferences for universities in the future, the official responsible for these conferences stated that none are currently scheduled because of limited resources. For Commerce, one official has noted that more universities have recently begun attending its training seminars. However, while Commerce stated it has increased its outreach to universities in the last few years, GAO analysis of its outreach records indicated that several events that Commerce categorized as targeted at universities were provided to government research entities instead.

In addition to conferences and agency-provided training, both State and Commerce maintain telephone help desks and Web sites for exporters to obtain guidance on export controls. State employs a three-person response team to answer telephone inquiries and provide informal advice on export control issues in response to the thousands of calls received monthly from industry and academic institutions. Officials have indicated that they have improved help desk response times. Commerce's and State's Web sites provide exporters with guidance on when a license is needed and how a license can be procured. However, information is aimed at a more general audience, although a Commerce official stated that the agency has posted more background information on the fundamental research exclusion on its Web site. State officials noted that they have made their Web site more user-friendly and taken steps to expand the Web site to provide additional guidance to exporters.

Although State and Commerce have separate export control jurisdictions, the 2004 interagency Offices of Inspector General report stated that Commerce and State could improve their outreach by providing joint

training that explains the differences between the two agencies' licensing requirements and procedures—a recommendation that, according to the report, was supported by company and academic officials.[16] Furthermore, previous GAO reports have recommended that Commerce and State should better coordinate their efforts on analysis and export oversight.[17] However, State and Commerce have taken few actions to coordinate their outreach efforts to universities. Though State engaged in six outreach events with Commerce between November 2003 and April 2004, a State official explained that staffing such joint events with Commerce remains difficult because State must use personnel from its licensing staff to participate in these events. With a backlog in license applications, the processing of applications is a priority, and the agency is reluctant to divert those personnel to outreach efforts.

Commerce and State Have Not Conducted Analysis to Identify whether Any Risk Exists to Export-Controlled Information at Universities

State and Commerce officials expressed concerns that despite the export control exclusions for university research, the potential may exist for foreign nationals to access controlled defense and dual-use technologies and information on U.S. campuses. However, neither State nor Commerce has analyzed available data on university research contracts or student fields of study to identify any potential risk to export-controlled information at universities. According to federal internal control standards, agencies need to conduct risk assessments that generally include estimating the risk's significance and likelihood of occurrence, deciding how to manage the risk and determining what actions should be taken.[18]

In the absence of an assessment of export control vulnerabilities at universities, State officials and a Commerce Inspector General report

[16] Offices of Inspectors General, *Interagency Review of Foreign National Access to Export-Controlled Technology in the United States*, Report No. D-2004-062 (Washington, D.C.: Apr. 16, 2004).

[17] See GAO, *Export Controls: Improvements to Commerce's Dual-Use System Needed to Ensure Protection of U.S. Interests in the Post-9/11 Environment* , GAO-06-638 (Washington, D.C.: Jun. 26, 2006); GAO, *Export Controls: Department of Commerce Controls over Transfers of Technology to Foreign Nationals Need Improvement*, GAO-02-972 (Washington, D.C.: Sept. 6, 2002); and GAO, *Export Controls: Processes for Determining Proper Control of Defense-Related Items Need Improvement*, GAO-02-996 (Washington, D.C.: Sept. 20, 2002)

[18] GAO, *Standards for Internal Control in the Federal Government*, GAO/AIMD-00-21.3.1 (Washington, D.C.: November 1999).

stated they were concerned that academic officials may be misinterpreting export control regulations and guidance. According to State officials, universities are unaware of the nuances of export control regulations. Specifically, they said universities have difficulty distinguishing and tracking export regulations when a specific project develops from basic to fundamental or applied research. For example, one State official questioned whether universities devote sufficient resources to export compliance and apply for export licenses with State and Commerce to the extent their research activities warrant. This official believes that academic institutions should designate individuals responsible for understanding export control regulations and tracking exports, just as companies do. However, most of the academic institutions we visited had designated officials who were responsible for export control issues.

Despite these concerns, Commerce and State have not fully assessed university compliance information to identify the potential for export control vulnerabilities in university research. Commerce and State are tasked with export control oversight, including administering policy, processing licenses, and reviewing compliance by exporters. According to State officials, the department lacks the personnel to conduct extensive compliance audits. Instead, State relies on voluntary disclosure of possible export control violations—primarily by companies. When a company notifies State of a possible export violation, State may visit the company to discuss the problem and offer advice on weaknesses in the company's export control program. According to State officials, State does not target universities for compliance and has not visited a university because universities make up a small percentage of all exporters. Officials stated that Commerce's formal compliance review program is focused on deemed export license holders, the majority of which are from industry. Commerce does not conduct analyses to determine whether academic institutions that have not applied for licenses are in compliance with export control regulations. Instead, Commerce uses leads generated by intelligence agencies, internal Commerce sources, or the public via a hotline to investigate possible cases of export control violations.

Furthermore, although Commerce gathers information about certain universities' research activities on case-by-case basis, neither Commerce nor State analyzes available federal agency data on university research subjects to identify trends or determine the potential for such research to be subject to export control regulations. Given that much of the research conducted at U.S. universities is federally funded, data from other government agencies on the subjects of research conducted at academic institutions could supplement data from Commerce and State. For

example, DOD and NASA fund research at universities, some of which involves technologies that could become export controlled. General information on federal contracts available through the Federal Procurement Data System could also provide information on universities doing high volumes of research for other federal agencies. However, neither Commerce nor State makes use of these data sources to analyze trends in university research. Commerce, instead, relies on Internet searches or publicly available data on university research when preparing to meet with academic officials.

Other data could help Commerce and State identify potential risks of export control violations at academic institutions. Commerce officials stated that some foreign nationals on U.S. campuses are from countries that have historically tried to unlawfully obtain information about American technologies. However, while Commerce uses visa application data to generate leads for specific cases of deemed export violations, it does not use other data on foreign students' and scholars' majors or fields of study to identify potential areas of risk. For example, the Department of Homeland Security administers the Student and Exchange Visitor Information System—a database that tracks student nationality, school enrollment, and changes to major or field of study—but within the past 3 years neither State nor Commerce has requested these data from Homeland Security for the purposes of assessing export control risks. While a Commerce official indicated that the department would like to work with Homeland Security in the future, there is currently no information sharing between the two agencies for the purpose of identifying trends in student populations. Similarly, State does not use its Visas Mantis program—a security review procedure that aims to identify visa applicants who may pose a threat to U.S. national security by illegally transferring sensitive technology—to identify trends of foreign students and scholars and their fields of study, although it occasionally receives alerts about individuals who might pose an export control risk.

To improve controls at universities, in 2005 Commerce solicited information on the impact of a proposed rule change that would have modified the definition of the use of export-controlled equipment by foreign nationals, which was recommended by the Commerce Office of

Inspector General.[19] Commerce received more than 300 comments in which many cited the potential impact on university research, including numerous comments that the modified definition would capture too many routine operations carried out by students and employees and would thus create a large and generally unnecessary compliance, financial, and administrative burden for universities, and an increased licensing burden on Commerce. Subsequently, Commerce withdrew the advanced notice of proposed rule change in May 2006.

Recently, U.S. export regulatory, oversight, and law enforcement agencies have taken some steps to engage the academic community on export issues. For example, in September 2006, Commerce established the Deemed Export Advisory Committee to address broad export control issues. Specifically, the committee's charter is to review and provide recommendations to Commerce on deemed export policy. Thus, this committee will be responsible for ensuring that the deemed export licensing policy protects national security while ensuring that the United States continues to be at the leading edge of technological innovations. Its membership includes high-ranking university officials and chief executive officers of companies. According to Commerce officials, the committee members will serve for approximately one year. Commerce officials stated that they plan to address the issue of fundamental research in the committee's work and to include participation by a number of export control agencies in committee meetings. Commerce highlighted one such issue in a May 2006 *Federal Register* notice where it described the difference between the academic community views that export controls would only apply to the results of research, and the Commerce view that export controls can also apply to the conduct of research.

In September 2005, the Federal Bureau of Investigation established a separate forum to improve its lines of communication with the academic community. The National Security Higher Education Advisory Board—consisting of the presidents and chancellors of several prominent U.S. universities—aims to foster outreach and to promote understanding between higher education and the Federal Bureau of Investigation. The board will provide insight on the higher education culture of openness, academic freedom, and international collaboration and dialogue on issues such as terrorism, counterintelligence, and homeland security. In addition,

[19] U.S. Department of Commerce, Office of Inspector General, Bureau of Industry and Security, Final Inspection Report No. IPE-16176, *Deemed Export Controls May Not Stop the Transfer of Sensitive Technology to Foreign Nationals in the U.S.* (Washington, D.C., Mar. 31, 2004).

the Department of Homeland Security's Project Shield America aims to work with exporters of U.S. technologies that could be illegally exported, in particular, technologies used in weapons of mass destruction. According to a DHS official, the project's first outreach effort specifically targeting the U.S. academic community was scheduled to be held at the beginning of December 2006.

Conclusions

Balancing the desire to attract gifted foreign research scientists to U.S. universities and the need to ensure that export-controlled research at universities is not compromised is a considerable challenge. Since government agencies place the responsibility for complying with export control regulations on universities and other exporting entities, it is essential that Commerce and State, the two agencies primarily charged with administering export regulations, understand whether universities correctly interpret and apply relevant export control policies and regulations when deciding whether their research is subject to export controls. Despite some concerns that universities may not understand their responsibilities when conducting research, Commerce and State have not leveraged available government information and assessed potential risks of illegal transfers of export-controlled information at universities. Furthermore, although Commerce and State have separate export control jurisdictions, the lack of coordination between these agencies on outreach, analysis, and oversight could hamper their ability to determine whether export-controlled information may be at risk of transfer to foreign nationals in the course of university research. Without such knowledge, the government agencies cannot determine whether their guidance and training for universities is appropriate and sufficient and whether their resources are strategically targeted to optimize their ability to regulate and monitor universities' research. Until Commerce and State take such steps, sensitive information may remain vulnerable to improper transfer, potentially putting at risk U.S. national security interests.

Recommendations for Executive Actions

To improve the Department of Commerce's oversight of export-controlled information under its jurisdiction at universities, we recommend that the Secretary of Commerce direct the Administrator of the Bureau of Industry and Security to

- strategically assess potential vulnerabilities in the conduct and publication of academic research by becoming more knowledgeable about research being conducted on university campuses and, in consultation with other agencies, make use of available information on

technology development and foreign student populations at universities to assess the extent to which research at universities may be subject to export controls and

- on the basis of this assessment of university research and foreign student populations, improve interagency coordination, conduct additional outreach, and improve guidance to ensure that universities understand when to apply export controls.

To improve the Department of State's oversight of export-controlled information under its jurisdiction at universities, we recommend that the Secretary of State direct the Director of the Directorate of Defense Trade Controls to

- strategically assess potential vulnerabilities in the conduct and publication of academic research by becoming more knowledgeable about research being conducted on university campuses and, in consultation with other agencies, make use of available information on technology development and foreign student populations at universities to assess the extent to which research at universities may be subject to export controls and

- on the basis of this assessment of university research and foreign student populations, improve interagency coordination, conduct additional outreach, and improve guidance to ensure that universities understand when to apply export controls.

Agency Comments and our Evaluation

We provided a draft of this report to the Departments of Commerce, Defense, Homeland Security, and State for their review and comment. Commerce and State provided written comments, which are reprinted in appendixes II and III, respectively.[20] Defense did not have any comments on our draft report. Homeland Security provided technical comments, which are incorporated as appropriate throughout the report.

The Department of Commerce generally agreed with the report's recommendations, and stated that the Deemed Export Advisory

[20] Commerce's response letter also included comments on our draft report on export controlled information, *Export Controls: Agencies Should Assess Vulnerabilities and Improve Guidance for Protecting Export-Controlled Information at Companies*, GAO-07-69 (Washington, D.C.: Dec. 5, 2006).

Committee will aid in this respect. However, Commerce stated that Student and Exchange Visitor Information System (SEVIS) data are too general for use in identifying whether foreign students and scholars are subject to deemed export license requirements and that the collection of more specific visa application information is needed to assess vulnerabilities. While we agree that additional information from the visa application process could be useful, we found that SEVIS data include information that State and Commerce could use to perform general trend analysis to determine where best to focus outreach and compliance efforts at the university level. For example, an analysis of the majors that foreign students and scholars are pursuing at universities with large federal research contracts could provide Commerce and State with a proactive plan for targeting their outreach and training efforts for the academic community. Furthermore, while Commerce states that about one-third of its outreach events focus on the academic community, as our report states, we found that several of the events that Commerce classified as academic outreach were actually targeted at government research entities. Finally, Commerce correctly notes that our report focuses on fundamental research or other research that may be subject to export controls while excluding other research that falls outside of the export control universe. We identified the application of the fundamental research exclusion as a significant issue between the academic community and Commerce, and as Commerce's letter notes, some universities could benefit from a better understanding of deemed export control requirements. Our report indicates that an assessment of the vulnerabilities will best allow Commerce to focus its outreach and training efforts toward addressing this issue with the academic community.

State agreed with our recommendation to improve interagency coordination on training and guidance for universities and disagreed with our report's finding that it does not assess the potential vulnerabilities associated with export-controlled information at academic institutions. State responded that it is currently working with the Department of Commerce and the Department of the Treasury to conduct an export control conference during 2007 specifically aimed at universities. As we recommended in our report, such outreach that is specifically targeted to the academic community, particularly in coordination with other agencies, could improve universities' understanding of regulations concerning export controlled information. However, while such outreach may help universities seeking guidance on deemed export regulations, State would benefit from strategically assessing vulnerabilities at universities using readily available data, such as SEVIS, to help the department identify and address areas of potential risk. While State disagreed with our

recommendation, in its response it noted that it is considering conducting such an assessment. A trend analysis conducted on SEVIS and federal procurement data would be a valuable investment in providing a proactive plan for targeting outreach and training for universities. State also provided technical comments, which we incorporated throughout the report, as appropriate.

We are sending copies of this report to appropriate congressional committees and to the Secretary of Commerce, the Secretary of Defense, the Secretary of Homeland Security, and the Secretary of State. Copies will be made available to others upon request. In addition, this report will be available at no charge on the GAO Web site at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me on (202) 512-7333. Key contributors to this report are acknowledged in appendix IV.

Sincerely,

John Hutton, Acting Director
Acquisition and Sourcing Management

Appendix I: Scope and Methodology

To describe the nature of the research conducted at universities and identify the steps they have taken to comply with government export control regulations, we interviewed and obtained documentation from officials at 13 universities in positions such as vice chancellor for research, director of compliance, and general counsel. We conducted our review at the following 13 universities: Boston University, Boston, Massachusetts; California Institute of Technology, Pasadena, California; Carnegie Mellon University, Pittsburgh, Pennsylvania; Colorado State University, Fort Collins, Colorado; George Washington University, Washington, D.C.; Johns Hopkins University, Baltimore, Maryland; Massachusetts Institute of Technology, Cambridge and Lexington, Massachusetts; Stanford University, Stanford, California; University of California at Berkeley; University of California at Los Angeles; University of Colorado at Boulder; University of Maryland at College Park; and the University of Southern California, Los Angeles, California. To get a general overview of the nature of research at universities, we also spoke by telephone with officials from the Association of American Universities, Association of University Technology Managers, National Council of University Research Administrators, and the Southwest Research Institute. To systematically select the universities that we visited, we cross-tabulated data on universities with large numbers of international students or scholars, those that are associated with federally funded research centers, those that had applied for International Traffic in Arms Regulations or Export Administration Regulations export licenses, and those that had high-dollar contracts with either the Department of Defense or other government entities. While some of the selected academic institutions fall within the top tiers across the selection criteria, their views stated in this report do not represent those of the entirety of the U.S. academic community.

To assess Commerce's and State's efforts to determine the risk of export violations in university research, we interviewed officials from the Bureau of Industry and Security of the Department of Commerce and its related export offices: National Security and Technology Transfer Controls, Exporter Services, Export Administration, Export Enforcement. We also interviewed officials in the Department of Commerce's Offices of General Counsel and Inspector General. At the Department of State, we interviewed officials and reviewed data from the Bureau of Political-Military Affairs' Directorate of Defense Trade Controls, the Bureaus of Consular Affairs and International Security and Nonproliferation, and the Office of the Inspector General. We obtained and analyzed regulations, guidance, and training documents from these departments. We also collected data and other documentation and met with officials from the Office of Defense Procurement and Acquisition Policy of the Department

of Defense and the Department of Homeland Security's Immigration Policy Directorate and U.S. Immigration and Customs Enforcement.

We conducted our work from March 2006 through November 2006 in accordance with generally accepted government auditing standards.

Appendix II: Comments from the Department of Commerce

THE SECRETARY OF COMMERCE
Washington, D.C. 20230

November 22, 2006

Mr. John Hutton
Acting Director, Acquisition and Sourcing Management
Government Accountability Office
441 G Street, NW. Room 4718
Washington, DC 20548

Dear Mr. Hutton:

Thank you for the opportunity to provide comments on two related Government Accountability Office (GAO) Draft Reports, *Export Controls: Agencies Should Assess Vulnerabilities and Improve Guidance for Protecting Export-Controlled Information at Companies, GAO-07-69,* and *Export Controls: Agencies Should Assess Vulnerabilities and Improve Guidance on Protecting Export-Controlled Information at Universities, GAO-07-70.*

Along with a March 2004 report by the Commerce Department's Office of Inspector General (Inspection Report No. IPE-16176), these reports help draw attention to the importance of protecting sensitive export-controlled information without impeding the competitive position of U.S. industry and academia. Indeed, the issue of deemed exports is one that has received and continues to receive considerable attention from the Commerce Department's Bureau of Industry and Security (BIS).

Noting that deemed exports under the Export Administration Regulations (EAR) are separate from technology transfer restrictions under the International Trade in Arms Regulations (ITAR), we generally agree with the reports' recommendations to assess potential vulnerabilities within industry and academia and then conduct more targeted deemed export outreach and compliance activities. As the reports note, BIS has already taken significant action in this regard. In September, the Commerce Department established the Deemed Export Advisory Committee (DEAC), co-chaired by Robert Gates, President of Texas A&M University, and Norman Augustine, retired Chairman and CEO of Lockheed Martin Corporation, to review the entire issue of deemed exports. (Dr. Gates was subsequently nominated by President Bush as Secretary of Defense, and we are in the process of identifying a replacement as co-chair.) The DEAC has high-level members from industry, academia, and the security field who will review and make recommendations to me on how best to ensure that transfers of sensitive technologies to foreign nationals protect vital national security interests while ensuring that U.S. companies and universities continue to be the world's leaders in research and development.

In addition, BIS has expanded its already robust deemed export outreach program in all high-technology sectors, including universities, industry, and government laboratories. Significant outreach efforts have been undertaken with industry sectors and compliance officials on the requirements for deemed exports, including the requirement that license applications have in place a Technology Control Plan (TCP) to protect export-controlled information from unauthorized release. BIS publishes best practices guidance on TCPs on its website and discusses TCP requirements in enforcement outreach visits. Significantly, in September 2006, BIS officials addressed the annual convention of the American Society for Industrial Security (ASIS), a trade association of information and physical security management professionals, on the protection of export-controlled information and essential elements of TCPs in protecting such information from unauthorized access and release.

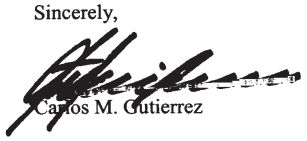
In addition to its Fiscal Year 2005 pilot program for deemed export compliance verification, BIS has also initiated a formal Deemed Export Compliance Review Program. Under this program, BIS conducts formal compliance reviews of deemed export license holders' compliance with license conditions, including the efficacy of their required TCPs. Deemed export licenses are targeted for review based on the sensitivities of the technology involved (e.g., such as that connected with weapons of mass destruction development) and countries involved. BIS completed 14 reviews under this program in Fiscal Year 2006, and will continue reviews under the program in Fiscal Year 2007.

Finally, BIS has worked closely with other agencies to gather data on potential risks of unauthorized technology transfers at universities. We have found that existing data, such as that found in the Department of Homeland Security's Student and Exchange Visitor Information System, is often too general to be useful in identifying whether foreign nationals will be subject to deemed export license requirements. Therefore, we have taken specific steps to improve this data, such as suggesting revisions to the relevant visa application form to collect information needed to assess technology transfer vulnerabilities from foreign nationals in the United States.

Based on the Department's work to date and the findings of your reports and other studies, it is clear that some universities and research institutions need to acquire a better understanding of deemed export control requirements. Because we recognize the important need to improve understanding of deemed export license requirements at universities, about one-third of BIS's 120 annual deemed export outreach activities now focus on the academic community. At the same time, however, it is important to note that deemed export licensing consideration is required only if a foreign national has access to export-controlled technology. The EAR identifies a larger universe of information that is not subject to the Department's regulatory oversight and, therefore, is not export-controlled. The full context of this universe bears mentioning since it is not fully addressed in the report, which focuses primarily on the concept of fundamental research. As noted in Section 734.3(3) of the EAR, certain publicly available technology is not subject to the requirements of the EAR. This includes information that is already published or will be published. Section 734.8 of the EAR clarifies that the information resulting from fundamental research which is intended for publication is considered publicly available and thus not subject to the EAR.

Informed by the reports' findings and recommendations and actions taken to date, BIS will continue to assess vulnerabilities and work to more precisely target outreach and compliance efforts. BIS's efforts will also be significantly informed by the recommendations of the DEAC, which we currently expect to receive in the fall of 2007.

Sincerely,



Carlos M. Gutierrez

Appendix III: Comments from the Department of State

United States Department of State

Assistant Secretary for Resource Management and Chief Financial Officer

Washington, D.C. 20520

NOV 30 2006

Ms. Jacquelyn Williams-Bridgers
Managing Director
International Affairs and Trade
Government Accountability Office
441 G Street, N.W.
Washington, D.C. 20548-0001

Dear Ms. Williams-Bridgers:

We appreciate the opportunity to review your draft report, "EXPORT CONTROLS: Agencies Should Assess Vulnerabilities and Improve Guidance for Protecting Export-Controlled Information at Universities," GAO Job Code 120508.

The enclosed Department of State comments are provided for incorporation with this letter as an appendix to the final report.

If you have any questions concerning this response, please contact Patricia Slygh, Acting Director of Management, Bureau of Political and Military Affairs at (202) 663-2844.

Sincerely,

Bradford R. Higgins

cc: GAO – John Neumann
PM – Gregory Suchan
State/OIG – Mark Duda

Department of State Comments on GAO Draft Report

EXPORT CONTROLS: Agencies Should Assess Vulnerabilities and Improve Guidance for Protecting Export-Controlled Information at Universities
(GAO-07-70, GAO Code 120508)

Thank you for allowing the Department of State the opportunity to comment on draft report "*Export Control: Agencies Should Assess Vulnerabilities and Improve Guidance on Protecting Export-Controlled Information at Universities.*"

The report highlights the potential risks of foreign students at universities being exposed to export controlled technology with or without proper authorization and makes recommendations for both the Department of State and the Department of Commerce regarding risk assessment and increased training and outreach for universities. The Department agrees with the GAO with respect to the need for increased training and outreach and is currently working with the Department of Commerce and the Department of Treasury to conduct an export control conference during 2007 specifically aimed at universities. We disagree with the GAO's assertion that we are not presently assessing the risk of unauthorized data exports. While State's DDTC may not have concretely quantified the potential risk, there is a recognition that a risk exists. We estimate that it would take from one-half to one full man year to conduct an assessment and are presently determining if we can conduct the study, along with the planned outreach to universities in FY 2007, within the limits of existing resources.

Appendix IV: Staff Contact and Acknowledgments

GAO Contact

John P. Hutton (202) 512-7773

Acknowledgments

John Neumann, Sharron Candon, Gregory Harmon, Arturo Holguin, Angela Thomas, and Sandra Moore made key contributions to this report. Other key contributors include Marie Ahearn and Karen Sloan.

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