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NEGOTIATING THE MINE FIELD

The Conduct of Academic Research in Compliance with Export Controls

CAROL T. CARR

National Association of College and University Attorneys

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Carol Carr is OSP Counsel for the Office of Sponsored Programs at the Massachusetts Institute of Technology. Prior to that, she was the Director of the Office of Technology Transfer at Georgetown University, a patent attorney, and Patent Examiner in the U.S. Patent and Trademark Office, where she focused on intellectual property and technology transfer issues encountered in academic research institutions. For the past five years, Ms. Carr has been most closely involved with the field of export controls and their impact on research programs, managing the export license filings and technology evaluations, and advising on research agreement negotiations. She is a graduate of the University of Richmond T.C. Williams School of Law, and has been practicing law for 22 years.

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Introduction

A Director of Sponsored Programs of a research institution with a growing aeronautics department believes that any space research performed at the institution is fundamental research and, therefore, exempt from the export control regulations. At a conference on research administration issues, the Director notices several sessions on space-related export control issues. *What are the current issues concerning export controls at research institutions of which the Director may be unaware?*

University counsel receives a phone call from a distraught scientist who has just read a news article about export controls, and fears that he has committed a crime by sending GPS equipment to Sudan. He doesn't want to go to jail! *Will he?*

An administrator is reviewing a research proposal submitted by a researcher in the Aeronautical Engineering Department. Suddenly the words "high resolution infrared camera" jump out. Reading further into the documents accompanying the proposal, she finds one from the company providing the equipment that requires the institution to treat the camera as export-controlled equipment. The research institution has a policy that it will not accept any research funding that requires any restrictions on the basis of foreign nationality. *Can the research project go forward?*

How This Monograph is Organized

Export controls are a dynamic and multi-faceted body of law and regulations that can affect a research institution in myriad ways. Within an academic institution, export control issues may arise on a variety of fronts. Compliance with the statutory and regulatory requirements is critical because non-compliance may carry serious civil and/or criminal penalties for both the researcher and the institution.

Export controls present a special challenge to research institutions because they demand that national security and the necessary safeguards it mandates be reconciled with the fundamental principle of unrestricted academic freedom, which includes the right to freely publish research findings within an unfettered global academic community. The resolution of the tension between these is one of evolving federal regulations, ongoing consideration by national and international scholarly societies and organizations such as the National Academies of Science, and continued discussions among the federal agencies creating the regulations and the research institutions that must accommodate them into their policies and procedures.

Part I of this publication provides an overview of export control laws and regulations, beginning with an explanation of the issues that affect research institutions most directly: *fundamental research* (and the related *fundamental research exclusion*) and *deemed exports*. It further offers broad-based overviews of the Export Administration Regulations (EAR) and the International Traffic in Arms Regulations (ITAR), as well as various other rules and regulations designed to protect research and technologies. Parts II and III describe the two most likely places wherein these export control issues may arise in an academic research setting – the research laboratories and departments and the research administration offices – and addresses the specific issues faced by the affected researchers and administrators.[1] Part IV addresses the issues an institution should consider in its management of export control matters to ensure compliance with export laws and regulations.

This segmented approach is taken because any export control issue is multi-faceted and inter-related. There are three aspects to each export control issue that must be considered:

Law – comprised of the body of laws and regulations, federal agencies, and all the individuals charged with ensuring compliance with export control laws, including legal counsel (in-house or outside), compliance managers, and empowered officials;

Research – comprised of the researchers and their staff who are responsible for the research project, the statement of work that defines the items or technology to be developed under the research project, the individuals who will participate in the project, and the location where the research will take place; and

Policies and Procedures – comprised of the institutional policy statements and procedures related to export controls, the institution's senior administrators who determine these policies, and the research and contract administrators who implement the institution's policies. While every institution must comply with export control laws, there are many critical policy questions that must be asked and answered internally to ensure that an institution has a solid foundation in its management of export control issues.

To resolve any export control matter, one must reconcile each of these aspects with the others, which often is a formidable challenge. Export control laws and regulations are complex, broad-reaching, and constantly changing; at the same time, each research project is case-specific, built on the unique elements of its science and the novel inquiry to be made. Yet, both interface within the infrastructure of the research institution, which also has its own distinctive characteristics.

The Special Role of University Counsel

A university counsel's primary responsibility is to ensure the institution's compliance with all the appropriate federal, state, and local laws, including export control laws and regulations. As a general rule, university counsel who work in areas potentially subject to export controls should be knowledgeable about the general framework of the statutory and regulatory export control requirements and aware of the federal policies relating to

1. The term "administrator" is intended to encompass any employee of the research institution who is responsible for managing research, including contract administrators in the sponsored programs office, as well as the administrators who may be placed in the departments, laboratories, or research centers.

research institutions. However, the university counsel charged with the management of export control matters for the institution sits at an interface of multiple challenges, which include maintaining a *current* knowledge of and complying with the requirements of export control laws and regulations, interpreting the issues that arise within the context of the institution's policies, and explaining the myriad associated issues to institution personnel who often are confused by the need for others to interfere with their standard operating procedures. Because there are so many different venues within an institution where an export control matter can arise, often the biggest challenge is identifying them all, much less handling them.

On a higher level, an institution's policies generally dictate how it addresses the export control laws and regulations, and senior administrators often look to institutional counsel to provide the necessary advice to make those decisions. This is not meant to imply that an institution has discretion whether or not to comply with export control laws; indeed they are the "law of the land," and compliance with them is imperative. Rather, institutional policies can minimize the impact of export controls on the institution's activities. For example, a policy decision not to permit any research on campus that may be subject to any restriction on publication would considerably reduce the likelihood for concern regarding the need for export licenses. (However, such a decision also might curtail considerably the scope of the research that could be pursued at that institution.)

I. Scope of Export Controls: Laws and Regulations and Related Exclusions and Exemptions[2]

The Fundamental Research Exclusion

Before discussing export control laws and regulations and, in particular, the details of the Export Administration Regulations (EAR) and the International Traffic in Arms Regulations (ITAR), it is important to understand the elements of a research institution that make it unique in the world of export controls. While the United States has utilized export controls since the early 19th century, the controls have evolved over the past several decades into a sophisticated set of regulatory tools with broad applications to control international commerce and safeguard national security. Research institutions have the same obligations as any other entity or party to comply with export control laws. However, many aspects of the research conducted at an accredited research institution in the United States fall under the *fundamental research exclusion,* which enables institutions to conduct the majority of research activities without the constraints of export control laws. At the same time, a limited subset of research projects do not qualify for the fundamental research exclusion, and it is critical for everyone involved in export control matters to understand and determine these limits. While it is often a challenge to make this determination correctly, the risk of substantial civil and criminal penalties mandates that it cannot be done otherwise. In particular, these penalties may include loss of export privileges, which for a research institution would virtually shut down its research programs. Therefore a thorough understanding of the meaning of both *fundamental research* and the *fundamental research exclusion* is essential.

The term *fundamental research* means "…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."[3] This distinction is critical because it is only the *results* of research falling within this definition that are excluded from the requirements of export control laws and regulations. No license is needed to share these results, even if they relate to items or technology that is otherwise controlled. Of significance to research institutions is that this exclusion permits U.S. universities to allow foreign members of their communities (e.g., students, faculty, and visitors) to participate in research projects involving export-controlled information *on campus in the U.S.* without the need for a license. However this exclusion does *not* permit the transfer of export-controlled information, materials, or items abroad, even to research collaborators, except under very limited circumstances.

The *fundamental research exclusion* came into existence during the Reagan administration when concerns about espionage during the Cold War raised the government's

2. In the various sections of this monograph, reference will be made to the various regulations that address export controls. It is recommended that the reader have available a copy of these regulations to which reference can be made. As these regulations can change often, it is preferable to refer to them online:
Export Administration Regulations (EAR) at: http://www.access.gpo.gov/bis/ear/ear_data.html;
International Traffic in Arms Regulations (ITAR) at: http://www.pmdtc.org/reference.htm#ITAR.

3. 15 C.F.R. § 734.8.

anxiety that research being performed within U.S. universities might get into the hands of enemies of the United States. When the research community became aware of certain export restrictions that potentially could infringe academic freedom, the presidents of five major U.S. universities requested clarification regarding the applicability of these export restrictions to teaching and research activities conducted by American universities. The federal government responded with the issuance of National Security Decision Directive 189 (NSDD 189), which stated:

> It is the policy of this Administration that, to the maximum extent possible, the products of fundamental research remain unrestricted. It is also the policy of this Administration that, where the national security requires control, the mechanism for control of information generated during federally funded fundamental research in science, technology and engineering at colleges, universities and laboratories is classification.[4] Each federal government agency is responsible for: a) determining whether classification is appropriate prior to the award of a research grant, contract, or cooperative agreement and, if so, controlling the research results through standard classification procedures; b) periodically reviewing all research grants, contracts, or cooperative agreements for potential classification. No restrictions may be placed upon the conduct or reporting of federally funded fundamental research that has not received national security classification, except as provided in applicable U.S. Statutes.[5]

After the tragedies of September 11, 2001, federal contract negotiators began taking the position that NSDD 189 was no longer national policy, and the research institutions raised their concerns anew. On November 1, 2001, then-Director of National Security Condoleezza Rice published a letter that addressed concerns raised by the Council on the Future of Technology and Public Policy[6] regarding perceived challenges to the status of fundamental research, in which she commented:

> The key to maintaining U.S. technological preeminence is to encourage open and collaborative basic research. The linkage between the free exchange of ideas and scientific innovation, prosperity, and U.S. national security is undeniable. This linkage is especially true as our armed forces depend less and less on internal research and development for the innovations they need to maintain the military superiority of the United States. In the context of broad-based review of our technology transfer controls that will begin this year, this Administration will review and update as appropriate the export control policies that affect basic research in the United States. In the interim, the policy on the transfer of scientific, technical and engineering information set forth in NSDD-189 shall remain in effect and we will ensure that this policy is followed.[7]

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4. The term "sensitive but unclassified" (SBU) was coined by the federal agencies in an attempt to preserve confidentiality without formal classification. However, the scope of SBU information has not been described, nor has the meaning of "sensitive" been defined, prompting concerns that it could function as a catch-all for whatever information the federal government does not want to release.

5. Complete text found in Appendix I.

6. The Council on The Future of Technology and Public Policy is an advisory group of the Center for Strategic and International Studies, 1800 K Street NW, Washington DC 20036.

7. November 1, 2001 Letter from Condoleeza Rice to Dr. Harold Brown (Co-Chairman, Center for Strategic & International Studies).

Nevertheless, research institutions continue to be on watch for potential infringement of the fundamental research exclusion. In 2004, the research community published a report of "troublesome clauses" that continued to appear in contracts, and from 2004 through Spring 2006 the community addressed proposed changes in Department of Commerce regulations and in the Defense Federal Acquisition Regulations (DFARS) that would have significantly undermined or unnecessarily burdened fundamental research. As of the date of this publication, export control/national security issues as they relate to university research are under review by a special committee of the National Academies of Science. In addition, the Department of Commerce is convening a federal advisory committee, entitled the Deemed Export Advisory Committee, that will, among other matters, review and make recommendations concerning important aspects of export controls as they affect universities.

While the results of fundamental research are exempt from export licensing under both the EAR and the ITAR, the scope of the fundamental research exclusion differs, depending on the regulatory regime. The key difference is that the exclusion under the ITAR is narrower; it applies only to the results of research conducted at accredited universities in the United States, whereas the exclusion under the EAR can apply to research conducted at a federal research laboratory or corporate laboratory. The ITAR does not contain explicit provisions allowing limited pre-publication review for proprietary information or to preserve patent rights.[8] However, it does contain within each of its categories related exclusions for hardware and defense services that are not found in the EAR, although the EAR may contain standard license exceptions that may correspond to the ITAR exclusions.

Deemed Export

While the fundamental research exclusion eliminates many of the reasons an export license may be required for a research institution, the concept of "deemed exports" creates almost as many new ones. The EAR and ITAR define "deemed exports" as: (a) the transfer or disclosure (visually, electronically, or in any other medium) (b) of "technologies" (EAR) or "technical data" (ITAR), i.e., information beyond general and basic marketing materials (such as source code or equipment installation, operation, and repair instructions), as well as consulting, instruction, training, or lectures concerning export-controlled equipment, materials, or items ("Materials or Items"), (c) to a foreign entity or individual (d) in the U.S. (even on campus). The ITAR does not use the term "deemed export" as it is used under the Commerce Department regulations, although the concept is the same under both the EAR and ITAR. Deemed exports do not include the mere transfer of the actual controlled materials or items without any associated information.[9] And, although a transfer of information that is technology (EAR) or technical data (ITAR) about controlled materials or items falls under the deemed export definition, a license is not always required in these circumstances. As explained in more detail below, if the information is "in the public domain" under ITAR, or "publicly available" under EAR, or constitutes "fundamental research" under EAR and ITAR, it is not subject to EAR or ITAR at all. If the information falls under a license exception, a license is not required.

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8. However, many practitioners believe ITAR implicitly allows for prepublication review.

9. 15 C.F.R. § 734.2; 22 C.F.R. § 120.17 regarding "deemed exports" and 15 C.F.R. § 772, § 774; 22 C.F.R. § 120.10(5) regarding "technologies" and "technical data."

There is a high likelihood that foreign students and researchers will be participating in fundamental research in an academic setting. There also is a particular fear on the part of the Federal government that these foreign researchers and students may be a conduit to other individuals in their native countries who may be less likely or unable to pass the scrutiny imposed by the visa process and by the Customs Office to enter the United States. In contrast to "exports," which are defined as actual shipment of any covered goods or items outside the United State, "deemed exports" are transfers of controlled technology to foreign persons, usually in the U.S., where the transfer is regulated because it is "deemed" to be to the country where the person is a resident or a citizen. Such technology may be released for export through:

- Visual inspection by foreign nationals of U.S.-origin equipment and facilities;
- Oral exchanges of information in the United States or abroad; or
- The application to situations abroad of personal knowledge or technical experience acquired in the United States.

For example, the transfer of infrared camera technology to a Chinese national in the U.S. may be regulated as if the transfer of the technology were made to the Chinese national in China. The transfer is thus "deemed" to be to China even though all activities take place in the U.S.

Who/What is a "*foreign national*"? Under the EAR, the distinction is made that the deemed export rule does not apply to "persons lawfully admitted for permanent residence in the United States and does not apply to persons who are protected individuals under the Immigration and Naturalization Act (8 U.S.C. § 1324b (a)(3))."[10] "Foreign national" is not an ITAR term per se, but the ITAR does define the term "foreign person" as "any natural person who is not a lawful permanent resident or who is not a 'protected individual.'" The term may include any corporation, business association, partnership society, trust, or any other entity, organization, or group that is incorporated to do business in the United States, as well as any governmental entity.[11]

Under the policies of most research institutions, foreign faculty, students, staff, and scholars may not be singled out for restrictions in their access to educational and research activities. Nor will the institution agree to restrictions on publication of research results, other than a short period (generally 30-60 days) for sponsor review (but not approval) of proposed publications to remove inadvertently included proprietary information provided by the sponsor or to seek patent protection. Failure to follow such a policy will destroy the institution's fundamental research exclusion and, without this protection, EAR or ITAR will then apply to information (technology or technical data) concerning controlled materials or items. Unless a license exception applies, a "deemed export" license may be required before the information is conveyed (even visually through observation) to foreign students, researchers, staff, or visitors *on campus*, and an actual export license will be required before the information is conveyed abroad to anyone.

General Framework of Export Laws and Regulations

The body of laws and regulations that governs export controls spans the breadth of all items in or originating from the United States, as well as certain foreign-made direct

10. 15 C.F.R. § 734.2 (b)(2)(ii).

11. 22 C.F.R. § 120.16.

products of U.S. origin technology or software.[12] In addition, related laws and regulations have been enacted, primarily in response to the terrorist attacks of September 11, 2001, but also in response to the concerns generated in many different sectors of the U.S. government and society after examining their own vulnerabilities. While these are not export control laws, per se, they touch on the intersection between science and national security in much the same way as the export control regimes. The USA Patriot Act and the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (BPARA), for example, address issues related to the use of biological materials that could be used as weapons. Similarly, the new Department of Homeland Security (DHS) has a statutory obligation to protect "sensitive" but unclassified homeland security information. As of this writing, the application of this concept to national university centers supported by DHS remains unresolved. While these are outside the scope of this publication, they are important to institutions that perform research involving select agents or that participate in DHS centers. The primary focus of this publication is on the remainder of the items covered by export controls regulated under the Export Administration Regulations (EAR) by the Department of Commerce, and the International Traffic in Arms Regulations (ITAR) by the Department of State, as well as the embargoes regulated by the Treasury Department's Office of Foreign Assets Control (OFAC).

Department of Commerce Export Administration Regulations

The Export Administration Regulations (EAR) are promulgated and implemented by the U.S. Department of Commerce, under Title 15, §§ 730-774 of the Code of Federal Regulations (C.F.R.). The EAR regulates the export of goods and services identified on the Commerce Control List (CCL), Title 15 C.F.R. § 774, Supplement No.1. The principal statutory authority for the EAR is found in the Export Administration Act of 1979, as amended,[13] which is "an act to provide authority to regulate exports, to improve the efficiency of export regulation, and to minimize interference with the ability to engage in commerce."[14]

The Bureau of Industry and Security (BIS) is responsible for formulating and implementing U.S. export control policy on dual-use commodities, software, and technology. Dual-use items subject to BIS regulatory jurisdiction have predominantly civilian uses, but also have military and proliferation applications, or may be used in terrorist activities.

The policy for implementing these statutes arose from Congress' perceived need to minimize uncertainties about and to encourage commerce with all countries with good diplomatic or trading relations with the United States. There also was the perceived need

12. There also are a number of items that have been preempted by other agencies that, by their nature, require specialized management. The Atomic Energy Act of 1954, as amended, governs both the civilian and military uses of nuclear materials. In particular, the export and re-export of commodities related to nuclear reactor vessels are administered under regulations by the U.S. Nuclear Regulatory Commission, and the export and re-export of technology related to the production of special nuclear materials are controlled by regulations administered by the Department of Energy. The Patent and Trademark Office administers regulations that provide for export to a foreign country of unclassified technology in the form of a patent application or its amendment, modification, supplement, or division.

13. The Act expired in August 20, 1994 and was reauthorized by Publ. L 106-508 (November 13, 2000). During the lapse, a national emergency declared under Executive Order 12924 (August 19, 1994) and extended by annual Presidential notices, continued in effect the provisions of the Export Administration Regulations. The Act lapsed again on August 20, 2001 and the President, through Executive Order 13222 of August 17, 2001 (66 Fed. Reg. 44025) (August 22, 2001) has continued the Regulations in effect under the International Emergency Economic Powers Act. It was continued for an additional year by notice published August 2, 2005.

14. Export Administration Regulations, Legal Authority, Part I.1.

to restrict the export of goods and technologies that would make a significant contribution to the military potential of another country. This would be detrimental not only to the national security of the United States, but also to preserving the domestic economy from the results of a short supply of materials. Export controls also were seen as a way to both implement boycotts against countries unfriendly to the United States and to counter boycotts against other countries friendly to the United States.[15]

One of BIS's principal objectives is to ensure that direct exports from the United States and re-exports of U.S.-origin items from third countries are consistent with U.S. national security and foreign policy interests, without imposing unnecessary regulatory burdens on U.S. exporters or impeding the flow of legitimate trade. Another critical objective is to ensure that U.S. persons are not involved in any activity related to the proliferation of chemical, biological, or nuclear weapons, or their means of delivery.[16] However, it is clearly stated in the EAR that U.S. policy supports a vigorous scientific enterprise, and this involves sustaining the ability of scientists and other scholars to communicate research findings freely, in accordance with the applicable provisions of law, by means of publication, teaching, conferences, and other forms of scholarly exchange.[17]

Department of State International Traffic in Arms Regulations

The principal statutory authority for the International Traffic in Arms Regulations (ITAR) is Section 38 of the Arms Export Control Act (22 U.S.C. § 2778), which authorizes the President to designate the articles and services deemed to be defense articles and defense services and to control their export and import. The statutory authority of the President to promulgate regulations with respect to exports of defense articles and defense services was delegated to the Secretary of State by Executive Order 11958, as amended (42 FR 4311).

By virtue of this delegation of authority, these regulations are administered primarily by the Director of the Office of Defense Trade Controls, Bureau of Political-Military Affairs, and Department of State.[18] The Directorate of Defense Trade Controls (DDTC), Bureau of Political-Military Affairs, in accordance with 22 U.S.C. §§ 2778-2780 of the Arms Export Control Act (AECA) and the International Traffic in Arms Regulations (22 C.F.R. Parts 120-130), is charged with controlling the export and temporary import of defense articles and defense services covered by the United States Munitions List (USML). Among its primary missions are: (1) taking final action on license applications for defense trade exports, and (2) handling matters related to defense trade compliance, enforcement, and reporting. The stated mission of the DDTC is to advance national strategic objectives and U.S. foreign policy goals through timely enforcement of defense trade controls and the formulation of defense trade policy.[19]

The Munitions List contains the defense articles and defense services designated by the President.[20] Under the policies found in the ITAR, an article or service may be designated or determined to be a defense article or defense service if it:

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15. Export Administration Regulations, Legal Authority, Section 3.

16. Bureau of Industry and Security 2005 Annual Report; Chapter 1; see: http://www.bis.doc.gov/News/2006/annualReport/BIS_annualReportComplete05.pdf.

17. Export Administration Regulations, Legal Authority, Section 3 (12).

18. 22 C.F.R. § 120.1.

19. *See*: http://www.pmdtc.org/whoweare.htm.

20. 22 C.F.R. § 120.2.

a) Is specifically designed, developed, configured, adapted or modified for a military application and, designating and determining defense articles and services,
   i. does not have predominant civil application, and
   ii. does not have performance equivalent (defined by form, fit and function) to those of an article or service used for civil applications; or

b) Is specifically designed, developed, configured, adapted, or modified for a military application and has significant military or intelligence applicability such that control under the ITAR is necessary.[21]

Office of Foreign Assets Control Regulations

The Office of Foreign Assets Control (OFAC) regulations are found at 31 C.F.R. Part V and guidelines for each of the embargoed countries or activities of concern are found online at: http://www.treas.gov/offices/enforcement/ofac/programs/index.shtml. The Trading with the Enemy Act (50 U.S.C. app. Section 1 *et seq*.) and the International Emergency Economic Powers Act (50 U.S.C. § 1701, *et seq*.) provide the statutory basis for the OFAC regulations that implement broad controls and embargo transactions with certain foreign countries.

Many of the sanctions that are imposed under the OFAC regulations are limited to blocking the property of persons known to support terrorism, or who threaten international stabilization or a country's attempts to develop a democracy. OFAC acts under Presidential wartime and national emergency powers, as well as authority granted by specific legislation. OFAC administers and enforces economic and trade sanctions based on U.S. foreign policy and national security goals against targeted foreign countries, terrorists, international narcotics traffickers, and those engaged in activities related to the proliferation of weapons of mass destruction. The sanctions are used to impose controls on transactions and freeze foreign assets under U.S. jurisdiction. Many of the sanctions are based on United Nations and other international mandates, are multilateral in scope, and involve close cooperation with allied governments.[22]

An issue related to OFAC sanctions may arise when a researcher or student wishes to travel to an embargoed country or to interact abroad with individuals who may be on the list of OFAC-sanctioned countries. An issue also may arise when an institution wishes to make a payment to an individual or an entity that may be in one of these countries, or if a university were asked to perform a service on behalf of a person located in one of the sanctioned countries – for example, if a student in a sanctioned country sent materials to a U.S. university for analysis or testing. During recent years, there have been approximately 12 specific countries of concern. They change from time to time; some (such as the Taliban of Afghanistan) have been removed when the reasons for embargo no longer are necessary, whereas others (such as Cuba) have an extensive history of U.S. embargo that has varied over the years only in its degree of severity. In addition to the specific countries of concern, there also are sanctions against groups of countries or entities involved in terrorism and narcotics, and sanctions to control illicit practices in diamond trading, and that impact the U.S. government's initiatives towards nonproliferation (i.e., to control the proliferation of weapons of mass destruction). The detailed reasons behind the embargo of each country or group are found in the summary of sanctions found in the citations above.

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21. 22 C.F.R. § 120.3.

22. *See*: http://www.un.org/News/ossg/sanction.htm.

State Sponsors of Terrorism

Countries determined by the Secretary of State to have repeatedly provided support for acts of international terrorism are designated pursuant to three laws: section 6(j) of the Export Administration Act, section 40 of the Arms Export Control Act, and section 620A of the Foreign Assistance Act. Taken together, the four main categories of sanctions resulting from designation under these authorities include: restrictions on U.S. foreign assistance, a ban on defense exports and sales, certain controls over exports of dual-use items, and miscellaneous financial and other restrictions.

Designation under the above-referenced authorities also implicates other sanctions that penalize persons and countries engaging in certain trade with state sponsors. Although these countries may change from time to time, as of August 2006, there are five countries designated under these authorities: Cuba, Iran, North Korea, Sudan, and Syria. An updated list is maintained on the site for the Department of State Counterterrorism Office found at: http://www.state.gov/s/ct/.

Restricted Party Screening Lists

All of the above agencies have developed regulations to address their individual mission. However, a requirement common to them all is to identify individuals or entities that may be enemies to the United States or who have proven themselves to be undesirable for commerce or interaction with the United States, and to take steps not to engage in business or other exchanges with them. To this end, a number of lists have been created to screen individuals or entities with respect to potential export concerns.

OFAC is the management arm of the U.S. Government with respect to the Specially Designated Nationals (SDNs), which are entities or individuals owned or controlled by, or acting for or on behalf of, the governments of target countries, or they are associated with international narcotics trafficking or terrorism. These individuals and entities are listed on both the SDN and Blocked Persons lists. Consequently, persons subject to the jurisdiction of the United States will know that they are prohibited from interacting with those individuals and entities, and that they must block all property within their possession or control in which the individuals and entities have an interest.

Similar lists are established under the Departments of Commerce and State, as well as the United Nations. Each agency has an interest in identifying those individuals or entities that have triggered a need to control their interactions with U.S. citizens and organizations. On September 23, 2001, President Bush signed Executive Order 13224, which provides the U.S. government with a powerful tool to impede terrorist funding by authorizing it to designate and block the assets of foreign individuals and entities that commit, or pose a significant risk of committing, acts of terrorism. The Order further authorizes the U.S. government to block the assets of individuals and entities that provide support, services, or assistance to, or otherwise associate with, terrorists and terrorist organizations designated under the Order, as well as their subsidiaries, front organizations, agents, and associates.[23] In addition, Title III of the USA PATRIOT Act, entitled "International Money Laundering Abatement and Anti-Terrorist Financing Act of 2001" requires "financial institutions" (defined broadly and covering colleges and universities when they engage in certain financial, insurance, travel, and real estate transactions) to put in place controls

23. http://www.state.gov/s/ct/rls/fs/2002/16181.htm.

(e.g., preventative measures, training, auditing, reporting) to guard against participating (even inadvertently) in money laundering for terrorists and other criminals.

There are many activities in which a university engages that potentially could trigger these requirements, including: hiring and paying wages or other compensation to faculty, staff, and students (whether U.S. citizens or foreign nationals); retaining, entering into contracts with, or paying contractors and consultants (individuals or entities, whether U.S. citizens or foreigners); awarding or paying financial aid or scholarships to U.S. citizens or foreigners; arranging for speakers and visitors and paying honoraria and travel reimbursements (whether U.S. citizens or foreigners); entering into housing, student, or other loans to faculty, students, or others, (whether U.S. citizens or foreigners); opening a university debit card (as is often the case for employees) or credit card (as is often the case for students) (whether for U.S. citizens or foreigners); entering into a research collaboration agreement or subcontract, planning or participating in a conference, or conducting a survey, whether with a U.S. or foreign entity/individual; entering into a technology transfer agreement, whether with a U.S. or foreign entity/individual; or making travel arrangements to another country.

The pertinent lists referenced above are found at the following locations:

- The OFAC Specially Designated Nationals List (of terrorists, drug kingpins, and others with whom transactions are proscribed): http://www.treasury.gov/offices/enforcement/ofac/sdn/.
- OFAC Economic Sanctions: http://www.treas.gov/offices/enforcement/ofac/programs/index.shtml.
- The EAR Denied Persons List: http://www.bis.doc.gov/DPL/Default.shtm or http://www.bis.doc.gov/dpl/thedeniallist.asp.
- The EAR Entity List: http://www.access.gpo.gov/bis/ear/pdf/744spir.pdf.
- The EAR Unverified List: http://www.bis.doc.gov/Enforcement/UnverifiedList/unverified_parties.html.
- The ITAR Prohibited Countries List: http://pmdtc.org/country.htm.
- The State Department Terrorist Exclusion List: http://www.state.gov/s/ct/rls/fs/2004/32678.htm.
- United Nations Sanctioned Persons Lists: http://www.pmdtc.org/UN_sanction_persons.htm.

It is standard business practice for commercial entities to perform this screening, and there are several software programs that exist for this purpose. Research institutions also are becoming more sensitized to the need to screen as they become more aware of the extents that activities in which they commonly engage necessitate this practice.

Scope of the Items Controlled by Export Control Laws

For all intents and purposes, any item that is exported from the United States by an individual or a company is subject to export control laws and regulations, and must be evaluated as to whether an export license may be required. Commercial companies do this as a matter of course. Research institutions are required in far fewer cases than industry to seek export licenses because of the various exclusions and exemptions under the export regulations, including the fundamental research exclusion. However, at any given time, there may be various items used or developed in the course of performing research in an

institution's research laboratories, including software, technology, and technical information, that may trigger the need for an export license.

The term "export" is not defined identically in the EAR and ITAR. Common elements of the definition include: actual shipment of any covered goods or items outside the United States; and release or disclosure, including verbal disclosures or visual inspections, of any covered technology, software, or technical data to any foreign national whether in the U.S. or abroad. The EAR definition is set forth in 15 C.F.R. § 734.2. The ITAR definition is set forth in 22 C.F.R. § 120.17. The ITAR also includes in its definition of export the performance of a defense service on behalf of, or for the benefit of, a foreign person, whether in the U.S. or abroad (22 C.F.R. § 120.17(5)). The official definition of export under the EAR and ITAR should be consulted when determining whether a specific act constitutes an export.[24]

It is sometimes difficult for research institution personnel to conceive that a research project might involve an export that could trigger the need for an export license. It may be helpful to consider the unique focus of concern of each of the federal agencies that oversee export controls. Through its EAR, BIS intends its export control regulations to serve the national security, foreign policy, nonproliferation, and short supply interests of the United States, and, in some cases, to carry out its international obligations. The control of weapons of mass destruction, including nuclear, biological, or chemical and the intention to limit the military and terrorism support capability of certain countries are critical elements. Thus, the EAR is intended to cover "dual-use" items, i.e., 10 categories of different technologies covering equipment, tests, materials, software, and technology that are designed for commercial purpose but that also can have military or security applications (e.g., computers, pathogens, civilian aircraft).

The DDTC's ITAR has a more focused purpose: it regulates goods and technology designed to kill people or to defend against death in a military setting.[25] The U.S. Munitions List includes such obvious items as firearms, ammunition, and explosives. It also includes all military vehicles (land, air, and sea); spacecraft (including nonmilitary); military and space electronics; protective personnel equipment; guidance and control equipment; components, auxiliary equipment, and miscellaneous articles related to military equipment; and space-related technology and research. It has increasing applicability to other university research areas such as nanotechnology/new materials and sensors and life sciences. "Defense articles" include technical data,[26] which encompasses software (unlike EAR). "Defense services" includes providing assistance (including training) anywhere in the U.S. or abroad to foreign nationals in connection with the design, development, engineering, manufacture, production, assembly, testing repair, maintenance, modification, operation, demilitarization, destruction, processing or use of defense articles, and/or furnishing controlled technical data to foreign nationals anywhere, *even if such information or technical data may be in the public domain*. Export of any item or technology on the U.S. Munitions List requires specific authorization from the State Department.

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24. *Export Controls and Universities: Information and Case Studies*, Council on Governmental Relations, February 2004.

25. It is unfortunate that this clear distinction was muddied when the satellite technology was moved from the Department of Commerce to the Department of State; this resulted in a large body of technology that was the subject of many research initiatives in research institutions suddenly becoming controlled by the ITAR rather than the EAR.

26. "Technical data" means information required for the design, development, production, manufacture, assembly, operation, repair, testing, maintenance, or modification of controlled articles.

Exclusions for Information that is Publicly Available or in the Public Domain

Despite this broad scope of controlled items and technology, there are a number of exclusions that immediately pare it down substantially. In addition to the fundamental research exclusion described earlier, there is a broader exclusion for information that is in the "public domain" under the ITAR or that is "publicly available" under the EAR. Information that is not subject to export controls must be already published, or, in the case of the EAR, "will be published" (and not just "ordinarily published," as in the fundamental research exclusion), through the following:

- Libraries open to the public, including most university libraries;
- Unrestricted subscriptions, news-stands, or bookstores for a cost not exceeding reproduction and distribution costs (including a reasonable profit);
- Published patents;
- Conferences, meetings, seminars, trade shows, or exhibits held in the U.S. (ITAR) or anywhere (EAR), which generally are accessible by the public for a fee reasonably related to the cost and where attendees may take notes and leave with notes; or
- Websites accessible to the public for free and without the host's knowledge or control of who visits or downloads software/information (clearly an acceptable method of publication under EAR, and likely an acceptable method under ITAR).[27] Information that is publicly available or in the public domain can be conveyed abroad – but controlled materials or items (e.g., computers, equipment, chemicals, and biological materials) cannot be exported abroad under this exclusion.

Educational Exclusions from EAR and ITAR

Whether in the U.S. or abroad, exclusions from EAR and ITAR cover teaching foreign nationals general science, math, and engineering commonly taught at schools, colleges, and universities (ITAR, *see* 22 C.F.R. § 120.10(5)), and conveying to foreign nationals information through courses listed in course catalogues and in associated teaching laboratories of academic institutions (EAR, *see* 15 C.F.R. § 734.3(b)(3), § 734.9), even if the information concerns controlled items. However, the EAR exclusion does not cover controlled information conveyed outside the classroom or teaching lab of an academic institution.

The Bona Fide Employee Exemption

The ITAR contains an additional exemption (ITAR § 125.4(10)) for:

> Disclosures of unclassified technical data in the U.S. by U.S. institutions of higher learning to foreign persons who are their bona fide and full time regular employees. This exemption is available only if:
> (i) the employee's permanent abode throughout the period of employment is in the United States;
> (ii) the employee is not a national of a country to which exports are prohibited pursuant to Section 126.1 (of the ITAR); and

27. *See* 22 C.F.R. § 120.10(5), § 120.11, § 125; 15 C.F.R. § 734.3(b)(3), §§ 734.7-734.10.

(iii) the institution informs the individual in writing that the technical data may not be transferred to other foreign persons without the prior written approval of the Directorate of Defense Trade Controls.

It should be noted that, for most universities, the "bona fide and full-time regular employee" element required for the exemption typically does not include students, and may not include postdoctoral researchers (depending on their funding source).

The "University Exemption" for Satellite Research (ITAR § 125.4(d))[28]

In response to concerns expressed by institutions about university-based space research involving satellites and the relationship to the ITAR, in March 2002, the State Department attempted to clarify the exemption of U.S. universities from obtaining ITAR licenses for such research. It published an amendment to the ITAR[29] covering the fabrication of scientific, research, or experimental satellites for fundamental research purposes and the transfer of technical data related to such articles. In so doing, the State Department reiterated that it does not control or regulate "fundamental research." The amendment clarified that the fundamental research exclusion allows accredited U.S. institutions of higher education to export such articles as long as all of the information is in the public domain, and the export is made only to certain universities and research centers in countries that are members of the North Atlantic Treaty Organization (NATO), the European Union, the European Space Agency, or to major non-NATO allies, such as Japan and Israel. A license is still required for export of exempted information (including discussions) and hardware to researchers from all other countries. In addition, collaborators in approved countries are required to guarantee that researchers from non-approved countries are not receiving restricted information. For many universities, this requirement creates a significant disincentive to seek an export license.

Insofar as information in the public domain is already exempted, it is not clear that this exclusion expands existing ITAR exclusions or exemptions. In fact, the result of the "clarification" appears to impose special conditions on university research with regard to satellites and space-based research beyond that otherwise provided in the ITAR.

Penalties

The reach of the export control laws is broad, and their breach can be very serious. Penalties can be assessed not only against the institution, but also against the individuals involved (including fines and/or prison sentences). Penalties also may result in civil sanctions, which could include loss of an institution's ability to do research.

Criminal penalties for willful violations under the Commerce Department's EAR can be as much as $250,000 and/or 10 years of imprisonment for each violation for individuals, and up to the greater of $1,000,000 or five times the value of the export for entities, depending on when the violation occurred.[30] Civil fines are from $10,000 to $100,000 per violation, depending on when the violation occurred and the classification of the goods or technology involved. The Commerce Department can assess multiple violations

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28. *Export Controls and Universities: Licensing Research?*, Robert Hardy, Director of Contracts and Intellectual Property Management, Council on Governmental Relations, Washington, D.C., 2005.

29. Fed. Reg. Vol. 67, No. 61, pp. 15099-15101, March 29, 2002.

30. 15 C.F.R. § 764.3(b).

per shipment.[31] For example, if the transfer of controlled software is made to a number of individuals, *each* transfer is considered a violation; thus, the fines can quickly become very onerous.

Criminal penalties assessed against individuals and entities for willful violation of the State Department's ITAR are up to $1,000,000 and/or up to 10 years of imprisonment for each violation.[32] Civil fines are up to $500,000 per violation.[33] Criminal penalties for violation of OFAC's regulations are up to $1,000,000 in fines for entities and $250,000 in fines for individuals, along with the potential for up to 10 years of imprisonment.[34] Civil fines are up to $55,000 per violation.

31. *Id.* § 764.3(a).

32. 22 U.S.C. § 2778(c).

33. *Id.* § 2778(e).

34. 31 C.F.R. § 515.701 (2003).

II. What Researchers Need to Know

The prior sections have addressed the overarching body of laws and regulations regarding export controls from the "30,000 foot level," and how they interface with the unique nature and policies of research institutions. The export control issues that concern university researchers are much closer to the ground and usually pertain to the specific research project in which the researchers are involved. Many are surprised to learn that these export control laws even apply to their research. Those who have been closely involved in projects that are sensitive to the federal government, such as the space and satellite programs, may be more cognizant of how export control laws affect their own projects. Even so, it is a universal challenge among research institutions that the individuals most knowledgeable about the research often are unaware of its potentially export-controlled elements.

Yet the researchers are the ones on the front lines – who have the technical expertise to evaluate the CCL or the USML listings and who help determine whether their intended export is covered. They also are the ones with control over the scope of the research project, who make the decisions regarding equipment or technology that will be implemented, and to whom it may need to be transferred. In particular, they determine when a research project may involve a transfer of equipment or technical information to colleagues abroad or to foreign nationals within the researcher's laboratory.

It is especially important for researchers to understand the potential pitfalls if export control laws are ignored. Even with a well-designed administrative infrastructure to identify and handle exports from the institution, researchers can still send packages with controlled objects to recipients outside the United States, carry controlled materials with them on trips abroad, or send emails with controlled information or controlled software electronically. The research institution should not be obligated to "police" these activities, but instead, should ensure that researchers are knowledgeable about (and that the administrators are trained to identify) where the possible risks may lie. To that end, investigators should be provided the tools to evaluate their specific research projects, but not necessarily to make the final determination. Because export control violations carry such heavy penalties, the final determination should always be made by administrators or attorneys trained in export controls, with the researcher's technical input.

Importance of the Statement of Work

The Statement of Work is one of the most important elements of an export control evaluation because it is the most succinct summary of the various aspects of the research project, including the anticipated results and the intended deliverables. In its ideal form, it will describe the scientific theory that is the basis of the research and provide information as to what materials or equipment will be used, what third-party information or technology may be needed, what form the results of the research will take, and what will happen to the deliverables. A Statement of Work in this format helps to more readily identify the export control issues for the research administrator responsible for reviewing and evaluating export control issues during the proposal process.

Researcher Review

In addition, researchers can provide valuable assistance with the following review processes:

- Analyzing for the various export control exclusions;
- Evaluating the research project to identify any potential export control issues; and
- Performing a Technology Evaluation to determine whether the equipment or technology is controlled.

Preliminary Analysis for Publicly Available/Public Domain and Fundamental Research Exclusions

It is important that a researcher understands the importance and extent of the fundamental research exclusion so that he or she can assist with evaluating what a project will entail, and can help to determine those elements that are not likely to trigger an export control issue. Specifically:

- If there are no restrictions on publication of results (other than a short period in which to seek patent protection or remove sponsor proprietary information); and,
- If a research project does not involve encrypted software, listed-controlled chemicals, or bioagents or toxins; and,
- If there is no reason to believe that any information or non-encrypted software being released will be used for a weapon of mass destruction; and,
- If there are no proprietary/confidentiality restrictions regarding any information or software to be used in the project and/or the information or software to be used is already published;
- THEN, both everything required to conduct the research project and the results of the research project are in the public domain and/or are publishable under the fundamental research rules, and there is no further concern about the need for an export license.[35]

This type of preliminary analysis filters out a large majority of research proposals from further consideration. To the extent the disclosure of information falls within the "safe harbor" of the fundamental research, public domain, or other regulatory exclusions that apply, researchers need not be concerned about export control issues on campus. However, if a research project does NOT satisfy the above requirements, then a further evaluation is needed, with the assistance of the institution's research administration or legal staff.

Evaluation of a Research Project that Does Not Fit in the Public Domain or Fundamental Research Exclusion

The first step in a further evaluation of a research project is to request the researcher to answer the following "critical" questions:

- Will any portion of the research be conducted off the research institution's main campus or outside the United States?

35. The fundamental research exclusion does not apply to certain encryption software controlled under ECCN (Export Control Classification Number) 5D002 or mass market encryption software controlled under ECCN 5D992.

- Under this research project, will the results and/or any deliverable be sent to a foreign country or foreign citizen (other than a foreign national in the U.S. at an accredited university) prior to publication?
- Does this research project involve technology or devices designed for or capable of use in military, security, or intelligence applications?
- Could the goods or technology help with the development of a program of weapons of mass destruction (nuclear, chemical, biological) or long-range missiles?
- Has any collaborator or the sponsor indicated that export-controlled items are necessary for the work to be performed or that they cannot be shared with non-U.S. citizens? Are there any restrictions on publication?
- Does the research project raise any of the issues surrounding deemed exports and the use of foreign nationals?
- Does the research project require the development of any of the items (including systems, equipment, and components; test, inspection, and production equipment; materials; software; and technology) that are found on the export control lists, i.e., the Commerce Control List (CCL) or the Munitions List (USML)?[36] To determine this, it is necessary to perform a project analysis to understand the full scope of the export-controlled items.

Technology Evaluation

If an item or technology is identified under the last bulleted item (above), the researcher's participation at this level is critical, since the resolution of any questions generally turns on the technical aspects of the equipment or technology. However, the analysis always should be performed in conjunction with an export control specialist within the institution or with outside counsel because a faulty determination could have severe consequences and penalties. A number of research institutions have developed decision tree tools for performing this analysis, which are available on their websites.

Other Considerations

The technology developed by researchers at a research institution is only one facet of the research that can trigger an export control issue. A research project nearly always will be built on prior knowledge gained through earlier research that is applied to a novel question to produce a new result. When this prior knowledge comes in the form of products, such as equipment, software, or materials, or the related technology (i.e., proprietary information, including technical data related to the development, production, or use of the products) received from the funding sponsor or other third parties, it is possible that the third-party information or products may be export-controlled, and thus subject to the regulations.

In particular, the acceptance of proprietary information from a party outside the research project may trigger an export control issue. Researchers should be cognizant that items such as schematics, flow charts, computations, configurations, and test plans may be export controlled. Any proprietary information should be clearly identified as export controlled material before being disclosed, and in fact should not be disclosed at all unless

36. A complete list of Category headings for the CCL and the ML, as well as a Composite List, is found in Appendix II.

accepted (preferably in writing) by the receiving party or as permissible under the institution's policies. To do otherwise may jeopardize the fundamental research nature of the entire research project, or at least the aspect that involves the controlled equipment or technology. If either of these is essential to the project, restricting the disclosure of the export controlled material to a limited number of individuals at the site of the disclosing party may be one way to manage the export control issue. Regardless, researchers who receive export-controlled information in this manner will want to keep it separate from their other research to ensure that the research project is not "tainted" in a manner that might destroy its nature as fundamental research. Each such constraint, however, is at odds with the generally free exchange of ideas that is the hallmark of academic research, and should be considered carefully before being accepted by the researcher or the institution.

Fortunately, these precautions do not make preliminary discussions among researchers or between a researcher and sponsor impossible. A researcher does not need to be concerned about triggering an export control issue when the discussions are focused only on the general scientific principles or systems descriptions. Basic marketing and other information that clearly are in the public domain also do not present any problems. Nor do the sharing of top-level drawings or descriptions, summaries of performance requirements, general descriptions of design capabilities or manufacturing facilities, or programmatic data. Ultimately, however, each project should be analyzed on its own facts.

No "Side Deals"

The sections above have described formal, contractual interactions among and between researchers and sponsors that can be managed, with the assistance of the institution's contracting office, to provide reasonable assurance of compliance with export control laws. However, the mission of a research institution and the very essence of science require constant communication between researchers and their counterparts as sponsors, much of which is and should be informal. That said, it would be easy for these communications to transgress into informal agreements to the extent that the researchers would not submit articles for publication that the sponsor might consider sensitive until they have been approved by the sponsor. But, such an informal agreement would invalidate the fundamental research exclusion, thereby exposing the researcher (and potentially the institution if it knowingly acquiesced) to the onerous penalties that may follow from a violation of export control laws. Every researcher needs to clearly understand that compliance with export control laws is not discretionary, and to ignore them in the mistaken belief that they do not apply to one's own behavior is to invite serious consequences.

Examples of Deemed Exports

Situations that potentially can give rise to export issues may include collaborating with foreign national researchers; using foreign national research assistants; giving foreign nationals access to areas or computer networks where controlled technical data is stored; permitting visual inspection of controlled hardware by foreign nationals; or any other disclosure of technical information to a foreign national.

To ensure that any information a researcher may convey to foreign nationals is not subject to export controls and does not require a deemed or actual export license, a researcher should:

- Publicly communicate and publish research results in a timely manner through one of the means that qualifies as "publicly available" or "in the public domain;" and
- Make certain that in any agreement there are no restrictions on publications of research results or on the individuals who can participate in the research. Unspoken or "handshake" agreements to comply with the restrictions destroy any protection the university and its researchers have under the fundamental research, public availability, and public domain exclusions.

Laptops and Global Positioning Systems (GPS)

Researchers commonly carry their laptops with them, both across campus and around the world. They need to be aware, however, that this means they are *exporting* their laptops. This is true not only when they take the laptop abroad, but also when they allow a person in a foreign country to use the laptop or allow a foreign national access to the laptop in the United States. The same applies to global positioning systems (GPS.)

Laptops and GPS devices, and their underlying software, are covered by the EAR and, in some cases, the ITAR. Export regulations vary based on the country to which a researcher is traveling and the purpose for which he or she intends to use the laptop or GPS. However, a licensing exception may apply to the export of a laptop or GPS, which potentially would enable a researcher to take the equipment abroad without violating either the EAR or ITAR. Excluding embargoed countries, faculty who wish to take their laptops out of the country to use in a university project that qualifies as fundamental research may be able to do so under the license exception for temporary export (TMP) if the laptop meets the requirement for "tools of trade" and is under the control of the researcher.

Assistance for Researchers

Ultimately, researchers need to know that they are not alone when faced with issues of export controls. While their assistance and knowledge are invaluable with respect to the technical aspects of an export control question or the preparation of an export license, they may not be aware of the resources available within the institution to ensure compliance with the administrative requirements of export control laws and regulations. Often, there is an individual in research administration and/or the legal counsel's office who is tasked with managing export control matters and determining whether a given project is subject to export control laws. Inasmuch as administrators are not necessarily technical experts, and the export control lists are lengthy and not always user-friendly, a committee comprised of a few faculty members "on call" from the academic disciplines most often involved in research at the institution can be helpful in determining whether a certain technology is covered under export control laws. Regardless, it always is wise to confirm this finding with counsel experienced in export controls, as the laws and lists are constantly being revised.

Finally, as addressed in Section IV of this publication, institutions should have a robust continuing education program to ensure that researchers remain cognizant of the laws and regulations that affect them, and so that they have the necessary contact information for the individuals or offices at the institution to address these matters.

III. What Administrators Need to Know

Administrators are in a unique position to view *all* facets of a research project that may raise any export control issues. Included among these are the terms and conditions of the agreements related to the research project (which are driven largely by the institution's policies); any information regarding a deemed export issue contained in the research proposal and the Statement of Work; the type of equipment and/or technology being used or to be developed; the individuals participating in the research; and the potential for exports of equipment or technical information to be sent outside the United States. It is at this administrative interface where institutional policies and the federal regulations governing export controls are transformed into contractual agreements and relationships, and where the fundamental research exclusion in essence "comes alive." As such, this section describes some practices and procedures that can help raise the administrator's awareness of export control issues during this process, facilitate his or her assessment of them, and bring together the appropriate university parties to address them as early as possible.

Proposal Submission

Just as a well-crafted Statement of Work can highlight potential export control issues, a properly designed cover sheet can filter out the majority of research proposals that do not pose any export control concerns and assist in identifying those that potentially do. As part of the submission process, internal routing forms can gather the following information from the researcher(s) and/or the departmental or laboratory administrator(s):

- Will any portion of the research be conducted away from the institution's main campus or outside the United States?
- Do the researchers intend to send research results and/or any deliverable to a foreign country or foreign citizen (other than a foreign national in the U.S. at an accredited university) prior to publication?
- Does the research project involve technology or devices that may be considered "dual-use" (i.e., not specially designed, developed, or modified for military use but nevertheless that can contribute to the development, production, or use of weapons)?
- Is the receipt of export-controlled information needed for the performance of the research project?
- Has any collaborator or the sponsor indicated that export-controlled items are necessary for the work to be performed, or that they cannot be shared with non-U.S. citizens?

Statement of Work

The Statement of Work can either facilitate the identification of any export control issues or it can be a time-consuming test of an administrator's investigative skills. Without other direct contact with the researcher who submits the proposal, it is the only tool to ascertain whether any of the equipment or technology being used in a research project is likely to trigger an export control issue, or if there are third-party contributions to the research that may create some constraints on the research. If prepared in the manner

described in the prior section, the Statement of Work should either satisfy the administrator's concern that no export control issues exist and that no additional information is needed, or highlight those elements that need further investigation.

Initial Proposal Review

Once the proposal submission, Statement of Work, and any proposed agreements have been received, the administrator can complete the initial proposal review. When reviewing these documents and any other materials provided by the sponsor, the administrator should consider whether they contain any language or terms that:

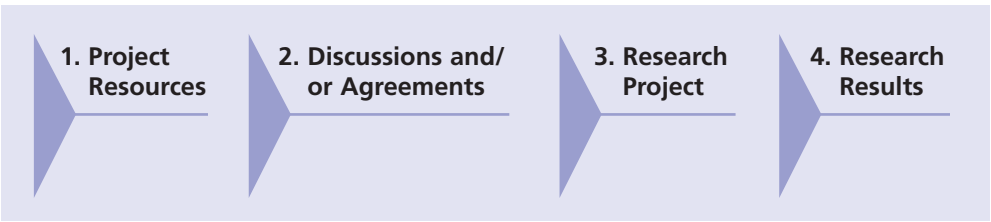
- Reference U.S. export regulations;
- Restrict non-U.S. entity participation based on country of origin;
- Prohibit access by non-U.S. citizens to project information;
- Prohibit the hiring of non-U.S. persons;
- Reference the need to train specific personnel for a special purpose, i.e., a defense service;
- Address the use of proprietary information;
- Address security concerns;
- Grant the sponsor pre-approval rights on publications;
- Grant the sponsor a right to prepublication review for matters other than the inclusion of patent and/or proprietary sponsor information;
- Allow the sponsor to claim resulting research information as proprietary or trade secret.

In particular, if any of these terms are found within a Request for Proposal or Broad Agency Announcement at the early stages of planning the research, the contract administrative staff should address these issues immediately so that there will be minimal delay in securing the funding. In some cases, it may be beneficial to consider "compartmentalizing" the research, i.e., dividing the Statement of Work into separate and distinct tasks that isolate the basic or fundamental research from those elements of the project that may pose a potential export control issue.

Most likely, the majority of research projects will be free of export control concerns. However, if the preliminary review leads an administrator to suspect that an export control question may exist, he or she needs to examine the proposal further.

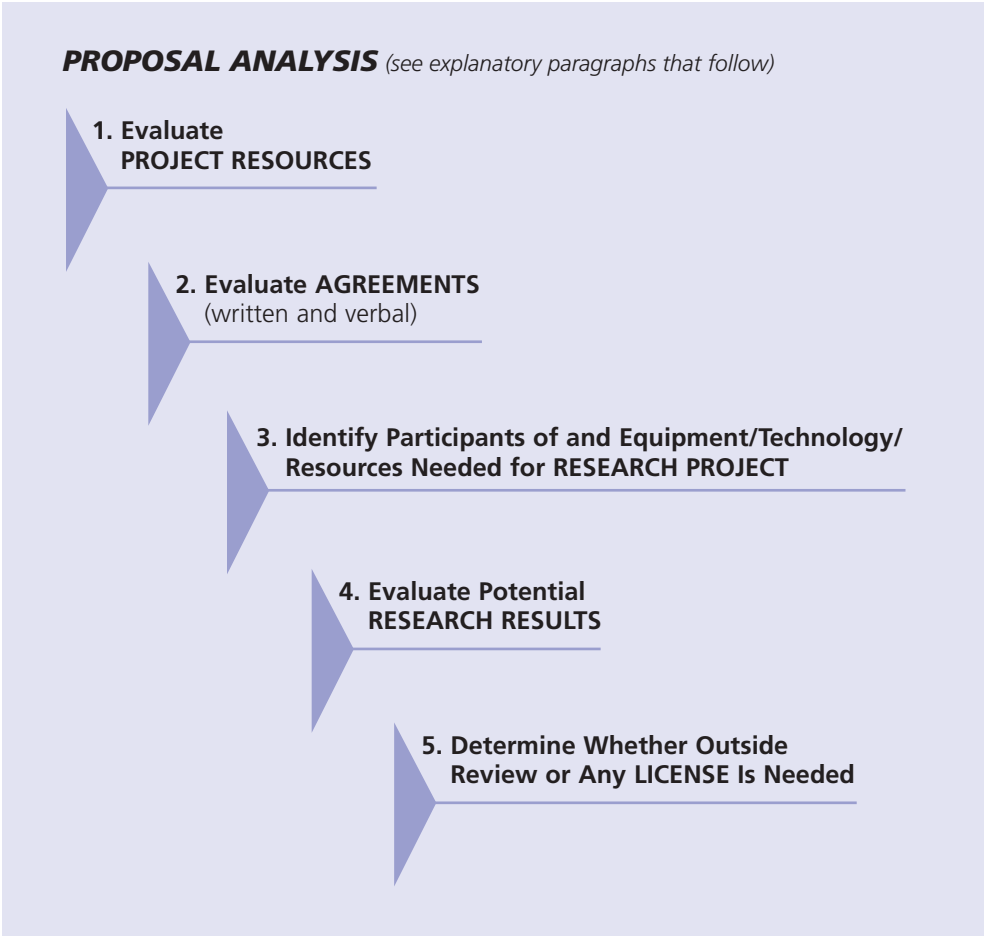
Advanced Proposal Review

Although every research project is unique, they share some common basic elements. Research projects do not take place in a vacuum; they generally are the product of existing input in some form that is applied to a novel question to produce a new result. In the broad overview, the stages of a research project are:



Each of these facets of research (i.e., Project Resources, Discussions and/or Agreements, Project Performance, and Research Results) may raise a potential export control issue. As stated earlier, the majority of research proposals and projects will *not* give rise to export control issues because they will follow the most common model of a research project, i.e., where the researcher builds on published research (information in the public domain) to explore new scientific ideas to produce research results that in turn will be published. When a carefully drafted proposal summary sheet (described above) raises the necessary pertinent questions, it performs the valuable function of isolating those proposals that may be subject to export controls and thus require further review.

When performing an advanced review of a proposal, the following steps and accompanying analysis should be considered:



1. PROJECT RESOURCES. Evaluate whether the Statement of Work or any other input from the researchers indicates that any of the Project Resources listed are necessary for performing the Research Project. Identify all the possible elements that will need to be acquired to perform the project and ascertain their source. In particular, consider the

contributions of any collaborators, or whether the sponsor is mentioned as providing equipment it wishes to have tested or otherwise used in the project. Is any proprietary information or software required?

2. **AGREEMENTS.** Review any documents, such as Request for Proposals, Broad Agency Announcements, or similar solicitations for provisions that may carry export control ramifications. If any agreements already have been proposed by the sponsor or funding agency, review them, as well. In particular, consider that non-disclosure agreements may have clauses hidden within them that characterize some or all of the information being provided as "export-controlled."[37] Explore whether there have been any discussions among the researchers and/or whether there are any written provisions in the agreements related to the Research Project that may characterize the research as something other than *fundamental research*. In particular, does any of the language in the agreements indicate or infer that any of the Project Resources be deemed a controlled item, or technology/defense article, or defense material?

3. **RESEARCH PROJECT.** Determine whether there are foreign nationals participating in the Research Project, either inside or outside the institution. Under the current regulations, there is no reason to be concerned about a foreign national's access to equipment or non-proprietary technology if he or she is associated with the institution and a member of the research team.

4. **RESEARCH RESULTS.** To the extent possible, determine the likely forms that the Research Results may take and if they are to be transported off campus. This requires careful scrutiny of the deliverables and often a "translation" into the specific forms identified as Research Results in the diagrams on pages 26 and 27. Publications of various kinds are the most likely type of deliverables, including reports, data transfers, or evaluation of results. Note whether software and prototypes may be described as a deliverable, or if there is any reference to equipment that the researchers have committed to design, build, or deliver. In these latter circumstances, it is important to determine where these tangible products ultimately will be sent.

5. **LICENSE.** Once the Research Results and deliverables are identified, the next step is to evaluate whether any are controlled items, and if so, whether a license is required for the country to which they would be sent.

At the conclusion of such an analysis, every element of a Research Project will have been examined for export control issues, and the administrator should have sufficient knowledge to assess whether any of the information indicates that an export control issue in fact exists. If so, the administrator needs to consult with the appropriate office or staff member that has been identified as the institution's contact resource. An individual trained in and responsible for the disposition of export control issues should make a final determination. If the review does *not* raise any such concern, a record should still be maintained in the Research Project files, as the federal regulations mandate documentation of any determination that a license may be required, whether affirmative or negative.

37. Sponsors often attempt to shift any burden to the recipient in this manner, as often the determination of whether equipment or technology is truly export controlled is a time-consuming and expensive process. However, such a characterization creates a considerable burden on the research institution and is inappropriate, as the owner of the technology is considered to be the first source for an inquiry regarding the classification of an item.

Translating a Research Project into the EAR and the ITAR

The same piece of equipment or technology can be described with different terminology in the EAR and/or the ITAR; thus, any attempt to classify or evaluate whether the specific elements of the Project Resources or Research Results are subject to or controlled under either of these regulations can quickly become confusing. For example, a Project Resource such as a laser or an imaging system may be an Item under the EAR, but termed a Defense Article under the ITAR. The following diagrams identify for each of the steps described above how each element of the Project Resources or Research Results would be defined under the EAR and ITAR, respectively.

EAR

1. Project Resources

Items

Commodities
- Materials
- Articles
- Supplies

Technology
- Technical Data
- Technical Assistance

Software
- Non-encryption SW
- Encryption SW

Information
Proprietary
Publicly available

2. Via

Discussions
Agreements
RA
NDA
MTA
Loan Agrmt

3. Research Project

Researchers on campus/ off campus

Foreign Nationals on campus/ off campus

Institution resources

4. Research Results

Items

Commodities
- Materials
- Articles
- Supplies

Technology
- Technical Data
- Technical Assistance

Software
- Non-encryption SW
- Encryption SW

Information
Ordinarily published (EAR)
Published (ITAR)

Item: Means "commodities, software, and technology." When the EAR intends to refer specifically to commodities, software, or technology, the text will use the specific reference.

Commodity: Means any article, material, or supply except technology and software.

Technology: Specific information necessary for the "development," "production," or "use" of a product. The information takes the form of "technical data" or "technical assistance."

Technical Data: May take forms such as blueprints, plans, diagrams, models, formulae, tables, engineering designs and specifications, manuals, and instructions written or recorded on other media or devices such as disk, tape, read-only memories.

Technical Assistance: May take forms such as instruction, skills training, working knowledge, consulting services.

Development: Is related to all stages prior to serial production, such as: design, design research, design analyses, design concepts, assembly and testing of prototypes, pilot production schemes, design data, process of transforming design data into a product, configuration design, integration design, layouts.

Production: Means all production stages, such as: product engineering, manufacture, integration, assembly (mounting), inspection, testing, and quality assurance.

Use: Means operation, installation (including on-site installation), maintenance (checking), repair, overhaul and refurbishing.

Software: Means a collection of one or more "programs" or "microprograms" fixed in any tangible medium of expression.

Program: Means a sequence of instructions to carry out a process in, or convertible into, a form executable by an electronic computer.

Microprogram: Means a sequence of elementary instructions, maintained in a special storage, the execution of which is initiated by the introduction of its reference instruction into an instruction register.

Encryption Software:* Means computer programs that provide capability of encryption functions or confidentiality of information or information systems. Such software includes source code, object code, applications software, or system software.

** Note that the provisions of the EAR applicable to the control of software (e.g., publicly available provisions) are not applicable to encryption software. Encryption software is controlled because, like the items controlled under ECCN 5A002, it has a functional capacity to encrypt information on a computer system, and not because of any informational or theoretical value that such software may reflect, contain, or represent, or that its export may convey to others abroad.*

ITAR

1. Project Resources

Defense Articles
Items found on USML
Technical Data found on USML
- Information (see below)
- Software (see below)

Defense Service

Other Information
- Proprietary
- Publicly available

2. Via

Discussions Agreements
RA
NDA
MTA
Loan Agrmt

3. Project Performance

Researchers on campus/ off campus

Foreign Nationals on campus/ off campus

Institution resources

4. Research Results

Defense Articles
Items found on USML
Technical Data found on USML
- Information (see below)
- Software (see below)

Defense Service

Information
Published (ITAR)

Defense Article: Means any item or technical data designated the Munitions List. This term includes technical data recorded or stored in any physical form, models, mockups, or other items that reveal technical data directly relating to items designated the Munitions List. It does not include basic marketing information on function or purpose or general system descriptions.

Technical Data means:

(1) Information, other than software as directly related to defense articles, which is required for the design, development, production, manufacture, assembly, operation, repair, testing, maintenance, or modification of defense articles. This includes information in the form of blueprints, drawings, photographs, plans, instructions, and documentation.

(2) Classified information relating to defense articles and defense services;

(3) Information covered by an invention secrecy order;

(4) Software directly related to defense articles;

(5) This definition does not include information concerning general scientific, mathematical, or engineering principles commonly taught in schools, colleges, and universities or information in the public domain. It also does not include basic marketing information on function or purpose or general system descriptions of defense articles.

Defense Service means:

(1) The furnishing of assistance (including training) to foreign persons, whether in the United States or abroad in the design, development, engineering, manufacture, production, assembly, testing, repair, maintenance, modification, operation, demilitarization, destruction, processing, or use of defense articles.

Continued Monitoring: Award Receipt and Management

Even after an institution receives an award, the administrator responsible for overseeing it needs to remain vigilant about recognizing export control issues. As administrators are aware, it is not uncommon for the terms to change between proposal submission and award. In addition, administrators should be well trained to recognize restrictions on publication or on dissemination to foreign nationals wherever they may arise, and furthermore should be aware that it may be the award document that contains those restrictions. The contract award should be examined carefully to confirm that it does not include any terms or conditions that would restrict the disclosure or dissemination of research results, or place any constraints on foreign nationals being able to work on the project at the institution.

It also is possible that the researchers have developed some new areas of inquiry that were not part of the original Statement of Work, or that they now wish to share technology or software that was not contemplated in the proposal phase of the research project. Likewise, sponsors may become aware of export control issues from their vantage and wish to impose new export control restrictions that were not part of the original proposal.

Administrators should also keep in mind that, as the research project goes forward, some aspects may require additional consideration of export controls. For example, a researcher may be asked to build a prototype for a sponsor as part of the deliverables but, when it comes time for delivery, it is discovered that the sponsor wishes to have the prototype sent to its parent company outside the United States. Another scenario might be where a researcher decides to leave the institution to work at one in a foreign country and wishes to take her laboratory equipment with her. These are typical situations where the need for a license was not evident at the beginning of the project, but ultimately results in the need for a technology review and possible license at a later point in time.

Export Control Issues Can Arise Outside of Research Projects

Finally, it always is possible for an export control issue to arise outside the scope of a research project. For example, researchers may receive forms or agreements with export control provisions when they try to purchase materials or software; they may wish to travel to certain countries that they or their Purchasing Office recognize as embargoed when a purchase order is being prepared or processed; or they may wish to collaborate on publications with foreign colleagues or share equipment with them outside the standard research project procedures. Administrators need to be aware of all the diverse places wherein these export control issues can be found. The institution also should recognize the importance of providing training to all members of the research community if it wants to ensure that all involved parties are aware of these issues.

Submitting a License

If the ultimate determination is that a license is required, both the Departments of State and Commerce provide excellent resources online for completing the license applications. They also permit electronic filing of license applications provided the applicant establishes an account with each department and secures the proper identification. This has enabled the license process to be more streamlined and easier to monitor, although one should still allow approximately 90 days to secure a license.

Bureau of Industry and Security (BIS)

Part 748 (http://www.access.gpo.gov/bis/ear/pdf/748.pdf) of EAR provides a clear explanation of the requirements for submitting a license to BIS. Further information and guidelines for some specific forms of licensing (in particular, deemed exports) are found online at: http://www.bis.doc.gov/licensing/index.htm. License applications can also be submitted electronically through the Simplified Network Access Process (SNAP), which requires only that an Applicant Identification Number (ID) and Personal Identification Number (PIN): system be secured by completing an Electronic Submission Letter in the form described at: http://www.bis.doc.gov/SNAP/pinsnaps.htm.

If there is a problem with a license application, the applicant will be contacted by BIS, which generally prefers to communicate by telephone or fax. Once the license has been issued, most likely it will contain special terms and conditions that apply. Restrictions and parameters may be placed on the license through specific limitations or provisos on the activities allowed under the license, or by other required plans for control or accountability.

Directorate of Defense Trade Controls (DDTC)

One will need to submit Form DSP-5 (Application for the Permanent Export of Unclassified Defense Articles) to the DDTC if an item or a technology will not be returned to the United States, or Form DSP-73 (Application for Temporary Export of Defense Articles) if one intends to have it returned. This application can be submitted electronically through the Electronic Licensing Entry System (ELLIE-Net), but must be followed up with multiple hard copies.

With both DDTC and BIS, an applicant will need to provide a cover letter that explains clearly what he or she is doing, what the program is about, why he or she needs the license, and whether he or she has had a previous license. It also should identify all the parties who will have access to the export-controlled item.

Office of Foreign Assets Control (OFAC)

OFAC is the least formalized of the agencies for license submission. An application for an OFAC license takes the form of a letter submitted by an individual authorized to bind the institution, which provides the information identified in the OFAC regulations for the specified country. The letter application should follow very clearly the list of information required to facilitate the review process by the OFAC licensing specialists.

IV. What Every Institution Needs to Have – A Compliance Program

In view of the considerable penalties that can be imposed for infractions of the export control laws and regulations, it is in every institution's best interest to develop and adopt an export management system designed to monitor and manage its export control issues. The system should reflect the existing procedures that an institution follows in handling controlled equipment and technology, and, as a best practice, it should contain an ongoing review and evaluation process to ensure that the institution remains dynamic and responsive to any new regulations promulgated by the federal agencies. Finally, such a system is valuable in demonstrating the institution's accountability for export control matters in the event of an audit by one of the federal agencies that implements the federal statutes and regulations. The elements of an export management system described below are recommended by the various federal agencies, and the headings reflect the content and order in which such an audit likely would be done.

1. Institution Export Control Compliance Policy Statement

A research institution should have a clear and comprehensive policy statement that it will comply fully and completely with all U.S. export control laws and regulations, including those implemented by the Department of Commerce through its EAR and the Department of State through its ITAR, as well as those imposed by the Treasury Department through OFAC. Such a statement should be easily accessible by all personnel at the research institution.

2. Responsible Parties

Empowered Official. In the course of an audit, the federal agencies look for accountability for all aspects of the export control laws; thus, it is important to clearly identify the individuals within an institution who are responsible for export control compliance matters. In the case of the ITAR, there must be an identified Empowered Official who is authorized by the institution to sign documents and handle inquiries into any matters related to export controls.[38] The Empowered Official must be a U.S. person who is directly employed by the applicant, has authority for policy or management within the applicant organization, and is legally empowered in writing by the applicant to sign license applications or other requests for approval. This person must understand the statutes, regulations, and penalties, and have independent authority to investigate any license to verify the accuracy of the information submitted.[39] It also is necessary to register this person with the DDTC.

Finally, the empowered official should be responsible for handling all submissions to the BIS under the EAR or letter applications to OFAC since both agencies require individuals signing such submissions to be authorized to bind the institution. Under the EAR, this person must be the applicant (or a designated agent of the applicant), and must have the authority of a principal party in interest.[40]

38. ITAR § 120.25.

39. 22 C.F.R. § 120.25.

40. 15 C.F.R. § 742.

Registration Requirements. Any person in the United States who engages in the business of either manufacturing or exporting defense articles or furnishing defense services is required to register with the Directorate of Defense Trade Controls. While registration itself does not confer any export rights or privileges, it generally is viewed as a precondition to issuing any license.

Although it is a policy decision whether an institution decides to register with the Department of State as an exporter, doing so provides the U.S. Government with necessary information as to who is involved in certain manufacturing and exporting activities. There are some exemptions that, in limited conditions, may apply to research institutions. Registration is not required for persons whose pertinent business activity is confined to the production of unclassified technical data or who engage only in the fabrication of articles for experimental or scientific purpose, including research and development.[41] If an institution believes that the research being performed at its campus falls under those exempted activities, it may choose not to register.

3. Recordkeeping

Requirements for recordkeeping under the EAR are found at: http://www.access.gpo.gov/bis/ear/pdf/762.pdf and in the ITAR at Section 122.5 covering *Maintenance of records by registrants.* While the EAR requires that records of all export transactions be kept for a period of five years (at a minimum), the recordkeeping practices of the institution should also be considered. Recordkeeping is required not only for the licenses that are filed, but also for all items and technology that are being considered for export to be sure that they are export-controlled and to ascertain how that determination was made.

4. Hiring Practices

Any foreign person entering the United States is first required to undergo review by the Department of State and U.S. Customs. After entry, employers are required to document how foreign nationals are hired by and tracked within the institution, including how new employees are oriented and when they transfer within or depart from the institution. These processes should be described in the export management system and be readily available for review in the event of an audit.

5. Admission Practices

The objectives for admission practices are similar to those related to hiring practices. It is important for an institution to demonstrate that it can document the foreign nationals it admits and then track them thereafter. The admission practice should describe the application and applicant review process conducted by the U.S. Consulate at the time of the initial visa request by the student, the inspection performed by the Bureau of Customs and Border Protection, the SEVIS validation and tracking, the process of handling visa extensions, and Applications for Immigration Benefits through the Department of Homeland Security. In addition to discussing these various processes in the export management system, they should be readily available for review in the event of an audit.

41. 22 C.F.R. § 122.1.

6. Internal Audits

Self-management is the key to minimizing outside management of an institution's export control practices. To this end, the office(s) within an institution for reviewing and ensuring compliance with federal regulations and institutional policies can be enlisted to assist with overseeing export control management. Internal audit objectives would include but not be limited to:

- Understanding and assessing the adequacy of management policies designed to ensure compliance with all U.S. export control laws and regulations;
- Documenting and evaluating controls implemented to ensure compliance with institutional policies;
- Testing the effectiveness of controls.

The scope of these objectives will include, but not be limited to, such areas as:

- Recordkeeping;
- Hiring policies and practices;
- Licensing practices;
- Training and education;
- Partner screening;
- Technology review;
- Registration of biological agents.

7. Education and Training

Numerous offices within an institution are affected by the export control laws and regulations; thus, there are myriad individuals who need to understand both the related issues and their respective role in handling them. *Education and training are the ultimate keys to ensuring institutional compliance*. And, because the scope of education is so broad, the training likewise needs to be broad to ensure that individuals are aware of the entire set of issues, but still focus on those elements for which their office is responsible. At a minimum, the export management system must include a program for keeping employees with export control responsibilities fully up to date on any amendments to the EAR and ITAR and how those amendments affect their responsibilities.

Some examples of efforts in this area are an institutionally managed website that contains the most current information distributed by the federal agencies, as well as the institution's senior administration; memos or other communications published on a regular basis to provide information on current issues; and reminders on proposal routing sheets and award notifications. Individuals responsible for this training might benefit from attending professional meetings that address recent developments in export controls and to then share the information with others at their institution through presentations tailored to address the specific issues most germane to the institution's administrative offices, departments, laboratories, and centers.

8. Partner Screening

In the context of export controls, the term "partner" encompasses any individual, entity, or group to which an export is being contemplated. This section of the export management system should cover the exporting procedures required by the institution,

in addition to any information regarding procedures for traveling to an embargoed country and the need to review the Restricted Party Screening Lists (see page 11). If the institution has a policy on issuing purchase orders to sanctioned countries, this also should be included.

9. Jurisdiction and Classification

This section of the export management system should address all of the following issues and explain how the institution addresses them:

Technology Review. All items (hardware, software, or technical data) that are exported by any means undergo an analysis to determine which U.S. government agency has jurisdiction over them.

- Identify, classify, and evaluate every matter that involves the potential export of a controlled hardware/software/technology for any applicability of export control restrictions.
- The research administration staff interview the researcher most knowledgeable about the technical aspects of the equipment or information under consideration for export, and together review the items listed in the Commerce Control List and/or Munitions List, as appropriate.
- Conduct further analysis on any item identified in one or more categories of a list to determine whether the item is controlled for its intended destination and, if so, whether any License Exceptions may apply.
- Consult outside counsel if there is any uncertainty in this determination.
- If it is determined that a license is required, follow the procedures in number 12 on page 35.

Registration of Biological Agents. The "Public Health Security and Bioterrorism Preparedness and Response Act of 2002" was passed to protect against the use of select biological agents in bioterrorism. The new law requires the Secretaries of Health and Human Services and Agriculture to adopt regulations that: (1) formally expand the existing list of CDC select agents and toxins; (2) require institutions and individuals who possess, use, or transfer such agents to register with the Secretaries, and to implement related training, safety, and security measures; (3) require the U.S. Attorney General to perform background checks on such individuals and on anyone who will have access to listed agents; and (4) require registered institutions and individuals to deny access to listed agents to anyone who does not pass the background check (including anyone who is a "restricted person" under the USA Patriot Act).[42] The Patriot Act's prohibition against "restricted persons" possessing, shipping, receiving, or transporting/transferring covered select agents and toxins continues to apply to individuals.

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42. The term "restricted person" means an individual who –

(A) is under indictment for a crime punishable by imprisonment for a term exceeding 1 year;

(B) has been convicted in any court of a crime punishable by imprisonment for a term exceeding 1 year;

(C) is a fugitive from justice;

(D) is an unlawful user of any controlled substance (as defined in section 102 of the Controlled Substances Act (21 U.S.C. § 802));

(E) is an alien illegally or unlawfully in the United States;

Select Agent Toxin Purchasing, Shipping, and Receiving Procedures. Viable select agents (including genetic elements), regardless of quantity, and select agent toxins in volumes over the exclusion limits, are subject to strict federal regulations under the Public Health Security and Bioterrorism Preparedness and Response Act of 2002. These regulations require: (1) individuals with access to any select agents, or toxins over the exclusion, to undergo a background check and approval by the U.S. Attorney General; (2) the laboratory, activities, and individuals with such access to be registered with HHS (or USDA, as applicable); and (3) individual and institutional compliance with laboratory and container security, agent/toxin inventory, emergency, safety, training, and other requirements. The Justice Department and FBI are taking an aggressive law enforcement approach to the requirements, and failure to comply is subject to individual and institutional criminal and civil liabilities.

10. Fundamental Research and Deemed Exports

An important keystone of a research institution's management of export control matters is a solid understanding by all institutional personnel of the meaning of fundamental research; therefore this should be addressed clearly within the export management system. The fundamental research exclusion has been discussed throughout this publication with particular focus on those individuals involved in the research process, i.e., counsel, administrators, and researchers.

As with the fundamental research exclusion, it also is imperative that researchers, administrators, and others have a thorough understanding of the issues surrounding deemed exports in a research setting. The export management system should show that the institution is clearly knowledgeable about the legal and regulatory basis of deemed exports and that it is conveying this information to the institution's researchers and other employees. Training on both fundamental research and deemed exports also should be an ongoing process to ensure that all new employees quickly gain an understanding of these concepts and how they are applied in a research institution setting.

11. Licensing Determination

Any license requirements for the hardware/software/technology being transferred generally will be set forth in a licensing determination in the manner described below.

- In accordance with the procedures in number 9 on page 33, all necessary information is gathered from the researcher and/or the entity from which the hardware/software/technology is being procured or to which it is being sent in order to assess the classification of the intended item or information for export.
- If a license is required, the appropriate agency forms are completed and submitted, generally in electronic form with hard copies sent by courier.

(F) has been adjudicated as a mental defective or has been committed to any mental institution;

(G) is an alien (other than an alien lawfully admitted for permanent residence) who is a national of a country as to which the Secretary of State, pursuant to section 6(j) of the Export Administration Act of 1979 (50 App. U.S.C. § 2405 (j)), section 620A of chapter 1 of part M of the Foreign Assistance Act of 1961 (22 U.S.C. § 2371), or section 40 (d) of chapter 3 of the Arms Export Control Act (22 U.S.C. § 2780 (d)), has made a determination (that remains in effect) that such country has repeatedly provided support for acts of international terrorism; or

(H) has been discharged from the Armed Services of the United States under dishonorable conditions.

- The designated administrative staff are available to answer any questions that the agency may raise; technical questions are answered by the researchers.
- The researchers are kept informed of the process and notified promptly of receipt of the export license. The office filing the license ensures that the parties who will be exporting the items or information understand any special provisions.
- The responsible party ensures that records are maintained so that the export activities comply with the timelines indicated in the license, and contacts the agencies in advance if a license needs to be extended.

12. Notification

In the event that a question arises regarding the propriety of specific transactions or that a potential violation has occurred, the institution may wish to engage outside counsel to evaluate the issue and, if necessary, communicate with the relevant export agency. Regardless, all communications from the institution should be made through one central office, and preferably by the empowered official.

NOTE: The above headings are intended only as guidelines for the main areas that an audit from a federal agency is likely to explore. An institution's export management system must reflect the reality of its compliance initiatives and the available resources. However, any steps that it takes to address these basic elements likely will be viewed favorably by the various export control agencies as an indication that the institution is making reasonable attempts to ensure compliance with the export control laws and regulations.

Conclusion

If one were considering happy endings to the scenarios presented in the Introduction of this monograph, they might read as follows:

- The Director of Sponsored Programs chooses to attend a conference session on space research-related export control issues. He discovers that there are specific export control issues regarding the transfer of equipment and instruments he knows are planned among the parties with which his institution is collaborating, most notably the governmental agencies, the other research institutions, and various industrial partners. He learns how the contract terms must be negotiated to preserve the fundamental research exclusion, and he realizes the institution needs to immediately implement a compliance program. He makes a note to meet with the principal investigators and the administrators of the research programs as soon as possible, and also to explore a relationship with the institution's outside counsel to ascertain how experienced they are with export controls. He also decides to take an earlier flight home.
- The research scientist isn't in jail – yet. However, after reading through the Munitions List with respect to the GPS units he has taken to Sudan, he realizes that some of his actions may have resulted in a violation. He seeks out the institution's counsel and has a privileged and confidential discussion. Counsel currently is exploring the details of the case and evaluating whether a voluntary disclosure may be necessary. Fortunately the institution has no prior violations on its record.
- The administrator quickly picks up her handbook on export controls, finds the section on analyzing technology, and discovers that the infrared camera is not on the Munitions List, but is found on the Commerce Control List. However, upon reviewing the several ECCNs that relate to it, she and the researcher and outside counsel determine that the specifications of the camera are outside the specifications of the controlled equipment; therefore, the camera would be classified as EAR99. With this information in hand, she contacts the company and negotiates out of the document the requirement to treat the infrared camera as controlled equipment, thereby enabling the project to go forward without violating the research institution's policies regarding foreign nationals.

The unhappy endings are left to the imagination.

It is important to keep in mind that the endings of these scenarios and any others that may arise in the course of institution-based research depend completely on the specific facts of a real life situation, as well as a body of statutory and regulatory laws that currently are in a highly dynamic state. In some respects, the story of how export controls will affect the standard operating procedures of research institutions is just beginning to unfold. New regulations are being promulgated on a regular basis, and the need has never been greater than *now* to be knowledgeable, conversant, and current on the myriad laws affecting college and university export control, and with which those institutions must comply.

Resources

There are numerous resources available to those wishing to learn more about the many issues discussed in this publication.

Research

Council on Governmental Relations: www.cogr.edu
American Association of University: www.aau.edu
National Association of College and University Attorneys: www.nacua.org
National Council of University and Research Administrators: www.ncura.edu

Governmental

Department of Commerce: http://www.commerce.gov/
Bureau of Industry and Security: http://www.bis.doc.gov/
Department of State: http://www.state.gov/
Directorate of Defense Trade Control: http://www.pmdtc.org/
Department of Treasury: http://www.treas.gov/
Office of Foreign Assets Control: http://www.treas.gov/offices/enforcement/ofac/
Office of Export Control Cooperation, Nonproliferation Bureau, U.S. Department of State: http://www.exportcontrol.org/
NASA Export Control Program: http://www.hq.nasa.gov/office/oer/nasaecp/
CDC List of Select Agents: http://www.cdc.gov/od/sap/docs/salist.pdf

Appendix I

[stamped:] UNCLASSIFIED
September 21, 1985

NATIONAL POLICY ON THE TRANSFER OF SCIENTIFIC, TECHNICAL AND ENGINEERING INFORMATION

I. PURPOSE

This directive establishes national policy for controlling the flow of science, technology, and engineering information produced in federally funded fundamental research at colleges, universities, and laboratories. Fundamental research is defined as follows:

"'Fundamental research' means 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."

II. BACKGROUND

The acquisition of advanced technology from the United States by Eastern Bloc nations for the purpose of enhancing their military capabilities poses a significant threat to our national security. Intelligence studies indicate a small but significant target of the Eastern Bloc intelligence gathering effort is science and engineering research performed at universities and federal laboratories. At the same time, our leadership position in science and technology is an essential element in our economic and physical security. The strength of American science requires a research environment conducive to creativity, an environment in which the free exchange of ideas is a vital component.

In 1982, the Department of Defense and National Science Foundation sponsored a National Academy of Sciences study of the need for controls on scientific information. This study was chaired by Dr. Dale Corson, President Emeritus of Cornell University. It concluded that, while there has been a significant transfer of U.S. technology to the Soviet Union, the transfer has occurred through many routes with universities and open scientific communication of fundamental research being a minor contributor. Yet as the emerging government-university-industry partnership in research activities continues to grow, a more significant problem may well develop.

III. POLICY

It is the policy of this Administration that, to the maximum extent possible, the products of fundamental research remain unrestricted. It is also the policy of this Administration that, where the national security requires control, the mechanism for control of information generated during federally funded fundamental research in science, technology and engineering at colleges, universities and laboratories is classification. Each federal government agency is responsible for: a) determining whether classification is appropriate prior to the award of a research grant, contract, or cooperative agreement and, if so, controlling the research results through standard classification procedures; b) periodically reviewing all research grants, contracts, or cooperative agreements for potential classification. No restrictions may be placed upon the conduct or reporting of federally funded fundamental research that has not received national security classification, except as provided in applicable U.S. Statutes.

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Appendix II

Commerce Control List

Category 0 – Nuclear Materials, Facilities and Equipment (and Miscellaneous Items)
Category 1 – Materials, Chemicals, Microorganisms, and Toxins
Category 2 – Materials Processing
Category 3 – Electronics Design, Development and Production
Category 4 – Computers
Category 5 (Part 1) – Telecommunications
Category 5 (Part 2) – Information Security
Category 6 – Sensors and Lasers
Category 7 – Navigation and Avionics
Category 8 – Marine
Category 9 – Propulsion Systems, Space Vehicles and Related Equipment

Munitions List

Category I – Firearms
Category II – Artillery Projectors
Category III – Ammunition
Category IV – Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs and Mines
Category V – Explosives, Propellants, Incendiary Agents, and Their Constituents
Category VI – Vessels of War and Special Naval Equipment
Category VII – Tanks and Military Vehicles
Category VIII – Aircraft, [Spacecraft] and Associated Equipment
Category IX – Military Training Equipment
Category X – Protective Personnel Equipment
Category XI – Military [and Space] Electronics
Category XII – Fire Control, Range Finder, Optical and Guidance and Control Equipment
Category XIII – Auxiliary Military Equipment
Category XIV – Toxicological Agents and Equipment and Radiological Equipment
Category XV – Spacecraft Systems and Associated Equipment
Category XVI – Nuclear Weapons Design and Test Equipment
Category XVII – Classified Articles, Technical Data and Defense Services Not Otherwise Enumerated
Category XVIII – Directed Energy Weapons
Category XIX – [Reserved]
Category XX – Submersible Vessels, Oceanographic and Associated Equipment
Category XXI – Miscellaneous Articles

Composite List

Does the research project require the development of any of the following items listed below or the use of any related laboratory equipment? (Please note that all items listed below encompass: systems, equipment, and components; test, inspection, and production equipment; materials; software; and technology.)[43]

Aerospace Technology
Including, but not limited to:

- Aircraft, Spacecraft, Space Vehicles and Associated Equipment
- Spacecraft Systems and Associated Equipment
- Navigation and Avionics
- Sensors and Lasers
- Propulsion Systems
- Propellant
- Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets

Marine Technology
Including, but not limited to:

- Submersible Vessels, Oceanographic and Associated Equipment
- Sensors (e.g., Acoustic) and Lasers
- Vessels of War and Special Naval Equipment
- Torpedoes and Mines

Nuclear Technology
Including, but not limited to:

- Nuclear Materials, Facilities and Equipment (and Miscellaneous Items)
- Nuclear Weapons Design and Test Equipment

Chemical/Biological
Including, but not limited to:

- Toxicological Agents and Equipment and Radiological Equipment
- Chemicals, Microorganisms, and Toxins

43. Please note that this is a summary of hundreds of pages of regulations. Consulting the regulations is the only way to obtain definitive guidance, although this list should help with the initial review.

Electronics/Computers/Telecommunications
(other than items commonly used in an office)
Including, but not limited to:

- Computers (developed in the course of, or as an integral part of, a research project)
- Telecommunications (developed in the course of, or as an integral part of, a research project)
- Information Security
- Sensors (Optical, Acoustic, etc.) and Lasers
- Avionics
- Electronics Design, Development and Production
- Fire Control, Range Finder, Optical and Guidance and Control Equipment
- Military Electronics

Materials/Material Processing
Including, but not limited to:

- Materials
- Material Processing (including, but not limited to, Robotic Processing)

Munitions/Firearms/Artillery/Directed Energy Weapons
Including, but not limited to:

- Propellant
- Firearms
- Ammunition
- Artillery Projectors
- Explosives, Incendiary Agents, and Their Constituents
- Bombs and Mines
- Directed Energy Weapons (e.g., Lasers)

Military Equipment/Vehicles
Including, but not limited to:

- Sensors and Lasers
- Propellant
- Military Training Equipment
- Protective Personnel Equipment
- Auxiliary Military Equipment
- Tanks and Military Vehicles
- Fire Control, Range Finder, Optical Equipment

Classified Materials
Classified Articles, Technical Data and Defense Services not otherwise enumerated above

Miscellaneous Materials
Any article not specifically enumerated above that has substantial military applicability, and which has been specifically designed or modified for military purposes.

Glossary

Code of Federal Regulations (C.F.R.) – The United States *Code of Federal Regulations* (C.F.R.) is the codification of the general and permanent rules and regulations published in the *Federal Register* by the executive departments and agencies of the Federal Government.

Commerce Control List (CCL) – A list of items under the export control jurisdiction of the Bureau of Industry and Security (BIS), U.S. Department of Commerce. The CCL is found in Supplement 1 to part 774 of the EAR.

Commerce Control List (CCL) Category – The CCL is divided into 10 categories: (0) Nuclear Materials, Facilities and Equipment, and Miscellaneous; (1) Materials, Chemicals, "Microorganisms," and Toxins; (2) Materials Processing; (3) Electronics Design, Development and Production; (4) Computers; (5) Telecommunications; (6) Sensors; (7) Navigation and Avionics; (8) Marine; (9) Propulsion Systems, Space Vehicles, and Related Equipment.

Commerce Control List (CCL) Group – The CCL is divided into 10 categories. Each category is subdivided into five groups, designated by the letters A through E: (A) Equipment, Assemblies, and Components; (B) Test, Inspection, and Production Equipment; (C) Materials; (D) Software; and (E) Technology.

Deemed Export – An export of controlled technology and software to a foreign national (other than a U.S. citizen or permanent resident) *inside* the United States.

Defense Article – (ITAR § 120.6) Any item designated in the USML. Examples include specified chemical agents, cameras designated for military purposes, specified lasers, and GPS equipment as noted above. It also means any technical data recorded or stored in any physical form, models, mock-ups, or other items that reveal technical data directly relating to the particular item or "defense article" listed in the USML.

Defense Service – (ITAR § 120.9) The furnishing of assistance (including training) anywhere (inside the United States or abroad) to foreign nationals in connection with the design, development, engineering, manufacture, production, assembly, testing, repair, maintenance, modification, operation, demilitarization, destruction, processing, or use of defense articles, and the furnishing of any controlled "technical data" (see definition below) to foreign nationals anywhere.

Denied Persons List – A list of specific persons who have been denied export privileges, in whole or in part. The full text of each order denying export privileges is published in the *Federal Register*.

Dual-Use – Items that have both commercial and military or proliferation applications. While this term is used informally to describe items that are subject to the EAR, purely commercial items also are subject to the EAR (*see* § 734.2(a) of the EAR).

Empowered Official – A U.S. person who:

- Is directly employed by the applicant or a subsidiary in a position having authority for policy or management within the applicant organization; and
- Is legally empowered in writing by the applicant to sign license applications or other requests for approval on behalf of the applicant; and
- Understands the provisions and requirements of the various export control statutes and regulations, and the criminal liability, civil liability, and administrative penalties for violating the Arms Export Control Act and the International Traffic in Arms Regulations; and
- Has the independent authority to:
  - (i) Inquire into any aspect of a proposed export or temporary import by the applicant; and
  - (ii) Verify the legality of the transaction and the accuracy of the information to be submitted; and
  - (iii) Refuse to sign any license application or other request for approval without prejudice or other adverse recourse. (22 C.F.R. § 120.25)

Export – There are several meanings in export control regulations, which include any of the following: 1) actual shipment of any covered goods or items; 2) the electronic or digital transmission of any covered goods, items, or related goods or items; 3) any release or disclosure, including verbal disclosures or visual inspections, or any technology, software, or technical data to any foreign national; or 4) actual use or application of covered technology on behalf of or for the benefit of any foreign entity or person anywhere.

Export Administration Regulations – The Export Administration Regulations (EAR), Title 15, Sections 730-774 of the Code of Federal Regulations (C.F.R.), means the regulations promulgated and implemented by the Department of Commerce that regulate the export of goods and related technology identified on the Commodity Control List (CCL), Title 15 C.F.R. 774, Supp. 1. Goods and technology on the CCL are *not* inherently military in nature; they are primarily and inherently commercial or potentially commercial in nature.

Export Control – The set of laws, policies, and regulations that govern the export of sensitive items for a country or company.

Export Control Classification Number (ECCN) – Identifies items on the Commerce Control List that are subject to the export licensing authority of the Bureau of Industry and Security.

Exporter – The person who has authority of a principal party in interest to determine and control the sending of items out of the country.

Export License – The approval documentation issued by an export agency authorizing the recipient to proceed with the export, re-export, or other regulated activity as specified on the application.

Foreign National – Any person who is not a citizen or Permanent Resident Alien of the U.S. Under the EAR, the term applies to "persons lawfully admitted for permanent residence in the United States" and does not apply to persons who are protected individuals (i.e., have been admitted as a refugee or granted asylum). (*See* Immigration and Naturalization Act (8 U.S.C. § 1324b (a)(3).) "Foreign national" is not an ITAR term per se,

but the ITAR does define the term "foreign person" as any natural person who is not a lawful permanent resident or who is not a "protected individual," and may also include any corporation, business association, partnership society, trust, or any other entity, organization, or group that is incorporated to do business in the United States. This also includes any governmental entity.

Fundamental Research – (EAR and ITAR) Basic or applied research in science and engineering performed or conducted at an accredited institution of higher learning in the United States where the resulting information is ordinarily published and shared broadly in the scientific community. Fundamental research is distinguished from research that results in information that is restricted for proprietary or national security reasons (EAR), or pursuant to specific U.S. government access and dissemination controls (ITAR).

Fundamental Research Exclusions – The EAR provides that university research normally will be considered as fundamental research unless the university or its researchers accept sponsor restrictions on publication of scientific and technical information resulting from the project or activity. The EAR specifically permits limited prepublication reviews by research sponsors to prevent inadvertent divulging of proprietary information provided to the researcher by the sponsor or to insure that publication will not compromise patent rights of the sponsor. The citation for the official definition of fundamental research under the EAR is 15 C.F.R. § 734.8.

The ITAR states that university research will not be deemed to qualify as fundamental research if: (1) the university or its researchers accept any restrictions on publication of scientific and technical information resulting from the project or activity; or (2) the research is federally funded and specific access and dissemination controls protecting information resulting from the research have been accepted by the university or the researcher. The ITAR citation is 22 C.F.R. § 120.11(8).

Good – Any article, natural or man-made substance, material, supply, or manufactured product, including inspection and test equipment, and excluding technology.

International Trafficking in Arms Regulations (ITAR) – The International Traffic in Arms Regulations (ITAR), 22 C.F.R. §§ 120-130, means the regulations promulgated and implemented by the Department of State that control the export of articles, services, and related technical data that are inherently military in nature, as determined by the State Department. These "defense articles," "defense services," and related "technical data" are listed on the Munitions List (USML), 22 C.F.R. § 121. Even some articles and technologies that are not readily identifiable as inherently military in nature – for example, research satellites – are included on the USML.

Munitions List – Articles, services, and related technical data designated as defense articles and defense services pursuant to the Arms Export Control Act.

Public Domain – (ITAR; 22 C.F.R. § 120.11) Information that is published and that generally is accessible or available to the public: (1) through sales at newsstands and bookstores; (2) through subscriptions that are available without restriction to any individual who desires to obtain or purchase the published information; (3) through second class mailing privileges granted by the U.S. government; (4) at libraries open to the public or from which the public can obtain documents; (5) through patents available at any patent office; (6) through unlimited distribution at a conference, meeting, seminar, trade show, or exhibition, generally accessible to the public, in the United States; (7) through public release (i.e., unlimited distribution) in any form (e.g., not necessarily in published form)

after approval by the cognizant U.S. government department or agency; and (8) through fundamental research in science and engineering at accredited institutions of higher learning in the U.S. where the resulting information is ordinarily published and shared broadly in the scientific community.

Re-export – An actual shipment or transmission of items subject to export regulations from one foreign country to another foreign country. For the purposes of the U.S. EAR, the export or re-export of items subject to the EAR that will transit through a country or countries to a new country, or are intended for re-export to the new country, are deemed to be exports to the new country.

Specially Designated National (SDN) – Any person who is determined by the U.S. Secretary of the Treasury to be a specially designated national for any reason under regulations issued by the Office of Foreign Assets Control.

Technical Assistance – Technical assistance may take such forms as instruction, skills training, working knowledge, and consulting services, and may also involve the transfer of technical data.

Technical Data – Information required for the design, development, production, manufacture, assembly, operation, repair, testing, maintenance, or modification of controlled articles. This includes information in the form of blueprints, drawings, plans, instructions, diagrams, photographs, etc. May take such forms as blueprints, plans, diagrams, models, formulae, tables, engineering designs, and specifications, manuals and instructions written or recorded on other media or devices such as disk, tape, or read-only memories. The ITAR definition does not include information concerning general scientific, mathematical, or engineering principles commonly taught in schools, colleges, and universities, or information in the public domain (ITAR § 120.10(5)).

Technology – Any specific information and know-how (whether in tangible form, such as models, prototypes, drawings, sketches, diagrams, blueprints, manuals, or software, or in intangible form, such as training or technical services) that is required for the development, production, or use of a good, but not the good itself.

U.S. Person – An individual who is a citizen of the United States or a foreign national with a visa status of Legal Permanent Resident (LPR). An LPR is also known as a Permanent Resident Alien (PRA).

NACUA Publications

NACUA publishes a variety of pamphlets, monographs, compendia, and other resources of interest to both higher education attorneys and administrators. The publication series offers more than 50 publications of different types and categories, and new titles are added regularly. For the most up-to-date listing of publications offerings and more detailed descriptions of any of the publications listed below, please go to: http://www.nacua.org/publications/index.asp.

NOTE: Prices are shown below as member institution price, followed by non-member price.

Pamphlets/Monographs

Access to Institutions of Higher Education for Students with Disabilities
Accommodating Faculty and Staff with Psychiatric Disabilities
The Campus as Creditor: A Bankruptcy Primer on Educational Debts
Campus Police Authority: Understanding Your Officers' Territorial Jurisdiction, 2006 Edition
Computer Access: Selected Issues Affecting Higher Education, 2nd Edition
Copyright Issues in Higher Education, 2005 Edition
Crime on Campus, 2nd Edition
Defamation Issues in Higher Education
The Dismissal of Students with Mental Disabilities, 2nd Edition
The Family Educational Rights and Privacy Act: A General Overview
The Family Medical Leave Act of 1993: Applications in Higher Education
HIPAA and Research
The HIPAA Privacy Regulations and Student Health Centers
How to Conduct a Sexual Harassment Investigation, 2006 Update
Immigration Law: Faculty and Staff Issues
Managing Financial Conflicts of Interest in Human Subjects Research
Negotiating a Faculty Collective Bargaining Agreement
Negotiating the Mine Field: The Conduct of Academic Research in Compliance with Export Controls
Race-Conscious Admissions and Financial Aid Programs
Students with Learning and Psychiatric Disabilities
Tax-Exempt Bonds: Considerations for College and University In-House Counsel
Understanding Attorney-Client Privilege Issues in the College and University Setting
What to Do When OSHA Comes Calling
What to Do When the EEOC Comes Knocking on Your Campus Door
What to Do When the NCAA Comes Calling
What to Do When the U.S.Department of Education, Office for Civil Rights Comes to Campus
Why You Can't Sue State U.

Compendia/Special Publications

Academic Freedom and Tenure
Academic Program Closures, 2nd Edition
Accommodating Students with Learning and Emotional Disabilities, 2nd Edition
Employment Discrimination Training for Colleges and Universities
Employment Issues in Higher Education, 2nd Edition
Environmental Law: Selected Issues for Higher Education Managers and Counsel
The Family Educational Rights and Privacy Act, 2nd Edition
Intellectual Property Issues in Higher Education, 2nd Edition
Legal Issues in Sponsored Research Programs: From Contracting to Compliance
NACUA Contract Formbook CD-ROM *(members only)*
The NACUA Handbook for Lawyers New to Higher Education
Online Education
A Practical Guide to Title IX in Athletics: Law, Principles, and Practices, 2nd Edition
Record Keeping and Reporting Requirements for Independent and Public Colleges and Universities, 3rd Edition
Religious Discrimination and Accommodation Issues in Higher Education
Sexual Harassment on Campus, 4th Edition
Student Disciplinary Issues, 3rd Edition
Study Abroad in Higher Education: Program Administration and Risk Management
Technology Transfer Issues for Colleges and Universities: A Legal Compendium
2000 Title IX In-House Audit of Athletic Programs

Practical Litigation Series

I've Been Sued: What Happens Now?
Helping Your Institution to Defend Yourself
The Settlement Process
Giving a Deposition: A Witness Guide
Overview of a Lawsuit

For More Information

The NACUA Publications Brochure, with detailed descriptions of the resources listed above, can be found at:
http://www.nacua.org/publications/brochure.pdf

For a list of publications available on-line, please go to:
http://www.nacua.org/publications/pubs/nacuaonline.asp

To place an order, please go to the on-line order form at:
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National Association of College
and University Attorneys
One Dupont Circle, NW, Suite 620
Washington, DC 20036
202-833-8390
FAX 202-296-8379
www.nacua.org