University of Minnesota
Export Controls Compliance Manual

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I. INTRODUCTION

Export controls are federal statutes and regulations that govern the transfer of certain goods, technologies, services, and money to non-U.S. persons and locations. The purposes underlying the U.S. Government’s export control regime are to protect national security and promote the foreign policy objectives of the U.S. and its allies around the world. For our purposes at the University of Minnesota, we need to understand three sets of export control regulations—the Export Administration Regulations (EAR), the International Traffic in Arms Regulations (ITAR), and the Foreign Assets Control Regulations. This Manual provides an overview of these export controls and how they apply to the activities of University personnel.

Export control issues can arise in a variety of sometimes surprising circumstances. For instance, as discussed further in Section V below, the University may need a U.S. Government export license before disclosing controlled technical data to a non-U.S. researcher, even when the disclosure takes place entirely on University grounds within the U.S. In addition, a license may be required to ship or carry controlled equipment, materials, or samples outside of the country. Finally, travel and exports to a number of embargoed countries are subject to various restrictions. Export controls are complicated and often counterintuitive, and you should not hesitate to seek guidance from the University’s Export Controls Officer, especially in the following circumstances:

- Whenever sponsors attempt to impose publication or personnel access restrictions on research activities, unless a grant administrator in the Office of Sponsored Projects Administration (SPA) is already handling the matter with the Export Controls Officer.
- Before receiving export-controlled technical information from an outside party, such as an industry or U.S. Government research sponsor, unless a SPA grant administrator is already handling the matter with the Export Controls Officer.
- Whenever documents from sponsors or other parties refer to the EAR, the ITAR, or export controls generally.
- Before accepting hardware, software, technology, or technical data from an outside party (such as an industry sponsor) to be used in a project as part of an instructional course.
- Before exporting from the U.S. any technology, equipment, materials, or chemical or biological agents (including toxins and genetic elements) on the EAR’s Commerce Control List.
- Before handling or exporting from the U.S. any hardware, software, technical data, or services subject to the ITAR.
- Before traveling to an embargoed country—
  - Cuba,
  - Iran,
  - North Korea,
  - Sudan, or
  - Syria.
II. COMMITMENT TO COMPLIANCE

The University is committed to complying with U.S. export controls.\(^1\) The University recognizes the importance of these laws and regulations, and expects compliance from all of its personnel. Violations can result not only in significant civil or criminal penalties for the University and potentially the individuals involved, but also in damage to national security and to the University's standing as a premier institution of research and learning.

III. EXPORT ADMINISTRATION REGULATIONS

The EAR\(^2\) are administered by the U.S. Department of Commerce, Bureau of Industry and Security (BIS).\(^3\) Except as authorized by BIS and the EAR, it is unlawful to engage in the export (or re-export) of

- Commodities, software, and technologies identified on the Commerce Control List (CCL);
- Items to restricted parties on the Entity and Denied Persons Lists; and
- Items to be used for nuclear, missile and rocket, or chemical and biological weapons applications.

As discussed further in Section V below, the notion of an “export” includes not simply the shipment of items outside the U.S., but also the release or disclosure of EAR-controlled software or technology to non-U.S. persons inside the U.S.

A. Items on the CCL

The CCL comprises a vast and diverse array of commodities, software, and technologies, to include certain military items and chiefly commercial items that have a potential defense, intelligence, or national security application. (Many of these items do not appear at first blush to be particularly sensitive or sophisticated.) The CCL is divided into ten Categories:

<table>
<thead>
<tr>
<th>Category</th>
<th>Title</th>
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<tbody>
<tr>
<td>0</td>
<td>Nuclear Materials, Facilities, and Equipment (and Miscellaneous Items)</td>
</tr>
<tr>
<td>1</td>
<td>Special Materials and Related Equipment, Chemicals, Microorganisms, and Toxins</td>
</tr>
<tr>
<td>2</td>
<td>Materials Processing</td>
</tr>
<tr>
<td>3</td>
<td>Electronics</td>
</tr>
<tr>
<td>4</td>
<td>Computers</td>
</tr>
<tr>
<td>5</td>
<td>Telecommunications and Information Security</td>
</tr>
<tr>
<td>6</td>
<td>Sensors and Lasers</td>
</tr>
<tr>
<td>7</td>
<td>Navigation and Avionics</td>
</tr>
</tbody>
</table>

\(^1\) This commitment is codified in the University’s Policy on Export Controls, which is available at [http://www.policy.umn.edu/Policies/Research/EXPORTCONTROLS.html](http://www.policy.umn.edu/Policies/Research/EXPORTCONTROLS.html).

\(^2\) The EAR are found at 15 Code of Federal Regulations (CFR), Parts 730-774.

\(^3\) The BIS website is at [http://www.bis.doc.gov](http://www.bis.doc.gov).
These Categories are further broken up into numerous subcategories, each of which is assigned a five-digit Export Control Classification Number (ECCN). Examples of ECCNs include 1C353 for certain plasmids and other genetic elements, 5D002 for certain information security software, and 6A005 for certain lasers.

In order to assess whether an EAR-controlled commodity, software, or technology requires a BIS license for export, it is first necessary to determine the ECCN (if any) to which the items belong. (If an item is not on the CCL and thus falls under no ECCN, it is termed “EAR99” and may be exported without a license in most cases.) Once an ECCN determination is made, specific control types applicable to the chosen ECCN must be evaluated and reviewed against a chart of countries that identifies whether an export subject to the applicable control types requires a license to the destination in question. The process of identifying ECCNs, assessing control types, and interpreting the chart of countries is a complicated endeavor that must be undertaken only in consultation with the University’s Export Controls Officer.

Because the CCL includes not only goods but also technologies, it is helpful to understand precisely what “technology” is for purposes of EAR compliance. The EAR define technology as technical data and technical assistance required for the development, production, or refurbishment/remanufacture of a product subject to the EAR. Instructions on merely how to use or repair a commodity subject to the EAR do not rise to the level of controlled technology. In other words, controlled technology consists of technical know-how about designing and making a commodity, but not operation or maintenance information.

B. Entity and Denied Persons Lists

In addition to the controls imposed via the CCL on items having ECCNs, the EAR generally prohibit the unauthorized export of anything subject to the EAR (including EAR99 items) to restricted entities on the Entity and Denied Persons Lists. These are lists of organizations and individuals that have engaged in weapons proliferation or other activities of national security concern to the U.S. Government. The Export Controls Officer ensures that non-U.S. parties to international outgoing material transfer agreements are not on these lists.

C. Restricted End-Uses

Finally, the EAR prohibit the unauthorized export of any items subject to the EAR that will be used in applications involving nuclear, missile and rocket, or chemical and biological weapons technologies. These restrictions apply to both items on the CCL and items classified as EAR99.

D. Obtaining Export Authorization

If it is determined that an export of an EAR-controlled item requires U.S. Government authorization, the Export Controls Officer will apply for an export license from BIS (or allow the use of an EAR license exception if one applies). Obtaining an export license can take anywhere
from thirty to ninety days, so University personnel planning to export any EAR-controlled items are encouraged to contact the Export Controls Officer as early as possible.

E. Anti-Boycott Regulations

A subset of the EAR known as the Anti-Boycott Regulations prohibit U.S. persons from participating in—or even agreeing to participate in—a boycott that is not consistent with U.S. Government policy. These regulations were created specifically in response to the Arab League\(^4\) boycott of Israel, which the U.S. Government does not support. The Anti-Boycott provisions prohibit the following activities (among others):

- Agreeing to refuse or actually refusing to do business with a boycotted country (e.g., Israel) or a blacklisted person;
- Agreeing to discriminate or actually discriminating against persons based on race, religion, sex, national origin, or nationality (such as agreeing not to hire Israeli nationals);
- Agreeing to furnish or actually furnishing information about the race, religion, sex, or national origin of personnel;
- Agreeing to furnish or actually furnishing information about relationships with a boycotted country or blacklisted person; or
- Agreeing to furnish or actually furnishing certain certifications regarding the eligibility of vessels to dock in a boycotting country’s ports.

The Anti-Boycott Regulations further provide that U.S. persons receiving a request to agree to participate in an unauthorized boycott must file a report with BIS. Examples of real-world boycott requests reported by the public to BIS may be viewed on the agency’s website, at http://www.bis.doc.gov/antiboycottcompliance/oacantiboycottrequestexamples.html.

University personnel who encounter boycott-related language in any transaction must contact the Export Controls Officer immediately, before taking any further action. The countries in which to be especially cautious are Bahrain, Bangladesh, Egypt, Iraq, Kuwait, Lebanon, Libya, Oman, Qatar, Saudi Arabia, Syria, the United Arab Emirates, and Yemen.

IV. INTERNATIONAL TRAFFIC IN ARMS REGULATIONS

The ITAR\(^5\) are administered by the U.S. Department of State, Directorate of Defense Trade Controls (DDTC).\(^6\) The ITAR require DDTC authorization for the export (including re-export) or brokering of defense articles and defense services. Section V below explains that an “export” occurs not only with the physical shipment of items outside the U.S., but also with the release or disclosure of ITAR-controlled technical data to non-U.S. persons inside the U.S.

\(^4\) Strictly speaking, not every member of the Arab League consistently participates in the boycott against Israel, and there are some non-members that do often boycott Israel, such as Bangladesh.

\(^5\) The ITAR are found at 22 CFR Parts 120-130.

\(^6\) The DDTC website is at http://www.pmddtc.state.gov.
A. Defense Articles

Defense articles are the hardware, software, and related technical data identified on the United States Munitions List (USML). The USML comprises twenty-one Categories (each of which in turn is divided into various subcategories):

<table>
<thead>
<tr>
<th>Category</th>
<th>Title</th>
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<tbody>
<tr>
<td>I</td>
<td>Firearms, Close Assault Weapons, and Combat Shotguns</td>
</tr>
<tr>
<td>II</td>
<td>Guns and Armaments</td>
</tr>
<tr>
<td>III</td>
<td>Ammunition/Ordnance</td>
</tr>
<tr>
<td>IV</td>
<td>Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs, and Mines</td>
</tr>
<tr>
<td>V</td>
<td>Explosives and Energetic Materials, Propellants, Incendiary Agents, and Their Constituents</td>
</tr>
<tr>
<td>VI</td>
<td>Vessels of War and Special Naval Equipment</td>
</tr>
<tr>
<td>VII</td>
<td>Tanks and Military Vehicles</td>
</tr>
<tr>
<td>VIII</td>
<td>Aircraft and Associated Equipment</td>
</tr>
<tr>
<td>IX</td>
<td>Military Training Equipment and Training</td>
</tr>
<tr>
<td>X</td>
<td>Protective Personnel Equipment and Shelters</td>
</tr>
<tr>
<td>XI</td>
<td>Military Electronics</td>
</tr>
<tr>
<td>XII</td>
<td>Fire Control, Range Finder, Optical, and Guidance and Control Equipment</td>
</tr>
<tr>
<td>XIII</td>
<td>Auxiliary Military Equipment</td>
</tr>
<tr>
<td>XIV</td>
<td>Toxicological Agents, Including Chemical Agents, Biological Agents, and Associated Equipment</td>
</tr>
<tr>
<td>XV</td>
<td>Spacecraft Systems and Associated Equipment</td>
</tr>
<tr>
<td>XVI</td>
<td>Nuclear Weapons, Design and Testing Related Items</td>
</tr>
<tr>
<td>XVII</td>
<td>Classified Articles, Technical Data, and Defense Services Not Otherwise Enumerated</td>
</tr>
<tr>
<td>XVIII</td>
<td>Directed Energy Weapons</td>
</tr>
<tr>
<td>XIX</td>
<td>[Reserved]</td>
</tr>
<tr>
<td>XX</td>
<td>Submersible Vessels, Oceanographic and Associated Equipment</td>
</tr>
<tr>
<td>XXI</td>
<td>Miscellaneous Equipment</td>
</tr>
</tbody>
</table>

Just as the EAR control the export of technology on the CCL, the ITAR control the export of “technical data” on the USML. Technical data are defined as

1. Information required for the design, development, production, manufacture, assembly, operation, repair, testing, maintenance, or modification of defense articles (including information in the form of blueprints, drawings, photographs, plans, instructions, or documentation);
2. Classified information relating to defense articles and defense services;
3. Information covered by an invention secrecy order; and
4. Certain software directly related to defense articles.
Note that this definition is more expansive than the definition of technology under the EAR. ITAR-controlled technical data include information required not only for design and manufacturing, but also for mere operation, repair, testing, and so on.

B. Defense Services

For our purposes, a defense service is

(1) The furnishing of assistance (including training) to non-U.S. 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; or
(2) The furnishing to foreign persons of any ITAR-controlled technical data, whether in the United States or abroad.

DDTC often emphasizes that any sort of technical assistance fitting the description in paragraph (1) is a defense service, even if only public domain information is used. So, for example, if a University researcher were to utilize public domain computational fluid dynamics software to assist a non-U.S. company in the analysis of a new foreign military aircraft design, that researcher would be “furnishing . . . assistance . . . to non-U.S. persons . . . in the design, development, [and] engineering” of a defense article. Such assistance is a defense service, the export of which requires prior DDTC authorization.

C. Obtaining Export Authorization

The Export Controls Officer is responsible for obtaining prior DDTC authorization to export a defense article or defense service. The process can take anywhere from roughly thirty to ninety days, so University personnel are advised to consult with the Export Controls Officer sooner rather than later. If an export meets certain narrow criteria set forth in the ITAR, the Export Controls Officer may authorize the use of a license exemption.

V. IN-COUNTRY TECHNOLOGY EXPORTS AND FUNDAMENTAL RESEARCH

Under both the EAR and the ITAR, the disclosure or release of controlled software, technology, or technical data to a non-U.S. person is deemed an export to his or her country of origin, even though the transfer or disclosure takes place entirely within the United States. Often referred to as a “deemed export” (as opposed to an actual, territorial export), this sort of activity may pose significant challenges to institutions that host non-U.S. students, researchers, and faculty. If, for instance, a research project involves the use of ITAR-controlled technical data about a military aircraft, only U.S. personnel may be allowed access to the data until the University goes through the effort of obtaining DDTC authorization for each non-U.S. participant.

7 A non-U.S. person is any individual who is not a U.S. citizen or permanent resident (i.e., “green card” holder), and who has not been granted asylum or other protected status. Accordingly, a student, researcher, or faculty member who is visiting the University from another country while on a visa is a non-U.S. person.
As a practical matter, the University is infrequently required to obtain such authorizations. Except in rare cases, our work constitutes “fundamental research,” the results of which are excluded from the scope of the EAR and ITAR. Fundamental research is defined as basic and applied research in science and engineering where the resulting information is ordinarily published and shared broadly within the scientific community, as distinguished from research, the results of which are restricted for proprietary reasons or specific U.S. Government access and dissemination controls.

Because the results of fundamental research are not subject to the EAR or the ITAR, they may be disclosed to non-U.S. persons in the U.S. or abroad without specific BIS or DDTC authorization.

It is important to understand that the fundamental research exclusion from the EAR and ITAR is not applicable if a project sponsor imposes certain publication or access restrictions or if the University receives proprietary export-controlled technical data subject to confidentiality obligations. Such restrictions elevate our export controls compliance risks and run counter to the University’s Openness in Research Policy. This Policy, which embodies the University’s dedication to the free and open exchange of ideas, allows for publication or access restrictions only after they have been approved via a case-by-case exception process requiring significant justification.

If the University consents to publication or access restrictions or to receiving export-controlled technical data in connection with a research project, the responsible Principal Investigator must work with the Export Controls Officer to ensure that the appropriate data security measures are implemented in the form of a Technology Control Plan.

VI. FOREIGN ASSETS CONTROL REGULATIONS

The Foreign Assets Control Regulations are economic sanctions rules administered by the U.S. Department of the Treasury, Office of Foreign Assets Control (OFAC). These regulations impose a variety of restrictions on transactions involving embargoed countries and entities identified by the U.S. Government on the Specially Designated Nationals (SDN) List.

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8 Also excluded from the scope of the EAR and ITAR are educational information and general principles shared in catalog courses, published materials, and papers presented at open conferences or seminars.
9 Certain encryption source code does not qualify for treatment as fundamental research.
11 The Foreign Assets Control Regulations are found at 31 CFR Parts 500-598.
12 OFAC’s website is at www.treasury.gov/ofac.
A. Embargoed Countries

The U.S. Government maintains comprehensive trade embargoes against five countries:

- Cuba;
- Iran;
- North Korea;
- Sudan (North); and
- Syria.

The details of each embargo vary, but as a general rule, it is unlawful to engage in unauthorized exports to, imports from, or transactions with these five countries. Anyone desiring to travel to an embargoed country must consult with the Export Controls Officer well in advance of his or her trip. Such travel may require a license form OFAC, or may be prohibited entirely.

While engaging in a transaction with anyone located in an embargoed country is generally proscribed, it is lawful for the University to host an individual from any of these countries who has a U.S. Government-issued student or work visa. We must be careful, though, not to export any goods, technical data, services, or money to such persons once they return to their home countries, except as authorized by OFAC.

B. SDN List

The SDN List is a compilation of individuals and organizations that the U.S. Government wishes to penalize for any of several reasons. This list includes terrorist organizations, banks that finance terrorism, drug cartels and kingpins, and others. In order to ensure that the University does not deal with such entities, SPA screens new award subrecipients, the University’s Purchasing department screens new vendors, and the Export Controls Officer screens non-U.S. parties to international outgoing material transfer agreements.

C. Obtaining Export Authorization

Obtaining OFAC authorization to engage in a restricted transaction is the responsibility of the Export Controls Officer, and may take anywhere from sixty to ninety days or even longer. Personnel needing such authorization should plan accordingly.

VII. RECORDKEEPING

The Export Controls Officer is responsible for ensuring that all records relating to controlled exports subject to the EAR, ITAR, or Foreign Assets Control Regulations are maintained for five years following whichever is later: (a) the date of export, or (b) the expiration date of the license or other authorization under which the export occurred. Records to be kept include export licenses, technology control plans, bills of lading, and related notes and correspondence.
VIII. PENALTIES AND REPORTING VIOLATIONS

Failure to comply with export controls can expose the University and possibly the personnel involved to significant liabilities. Potential penalties for violations include

- Multi-million dollar fines;
- Loss of federal contracts;
- Loss of export privileges; and
- Imprisonment for criminal (intentional) misconduct.

Violations may have other consequences, as well, such as

- Damage to national security;
- Harm to the University’s reputation; and
- Costs of investigations and related activities.

Accordingly, it is important to both the U.S. Government and the University that all personnel comply with export control requirements. Both organizations recognize, however, that mistakes can happen. When violations do occur, they must be brought to the attention of the Export Controls Officer as quickly as possible so that corrective measures may be taken. Inadvertent, occasional violations that are identified and remediated in a timely fashion are not likely to result in significant enforcement action. When violations are intentional, repeated, or systemic, in contrast, the probability of severe penalties is higher.

IX. INTERNATIONAL TRAVEL

Travel outside of the United States may give rise to various export control considerations. First, if you are taking or shipping equipment, materials, or samples to non-U.S. destinations, check with the Export Controls Officer first to determine whether a U.S. Government export license is required. In addition, if traveling to Cuba, Iran, North Korea, Sudan, or Syria, you must consult with the Export Controls Officer to determine whether a license is required or whether travel is even permitted at all.

As a general rule, an export license is not required to take luggage and a laptop during international travel, provided you are not transporting any EAR- or ITAR-controlled technical data, and provided you are not going to Cuba, Iran, North Korea, Sudan, or Syria. If you need to take controlled technical data with you or if you wish to travel with a laptop to one of these embargoed countries, you must first consult the Export Controls Officer.

For additional guidance regarding international travel and information security, visit the University’s International Travel Registry at http://travelregistry.umn.edu and click on “Technology Guidance” on the left. (Note that all University faculty and staff traveling outside the country must register, regardless of whether they plan to engage in controlled exports.)
Appendix

Abbreviations

BIS—Bureau of Industry and Security
CCL—Commerce Control List
CFR—Code of Federal Regulations
EAR—Export Administration Regulations
ECCN—Export Control Classification Number
ITAR—International Traffic in Arms Regulations
OFAC—Office of Foreign Assets Control
SDN—Specially Designated Nationals
SPA—Office of Sponsored Projects Administration
USML—United States Munitions List