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Overview of Export Control Regulations

Introduction

Export control laws are a complex set of federal regulations designed to protect United States (U.S.) national security; to prevent the proliferation of weapons of mass destruction; to further U.S. foreign policy including the support of international agreements, human rights and regional stability; and to maintain U.S. economic competitiveness. The export control regulations govern how information, technologies, and commodities can be transmitted overseas to anyone, including U.S. citizens, or to foreign nationals in the U.S. In addition to controlling exports to countries or individuals who are citizens of or located in those countries, the export control regulations ban exports to individuals and companies that have been involved in terrorist or drug trafficking activities as well as those who are barred from conducting exports because of previous violations of the export control laws.

Several federal agencies have jurisdiction over the control of exports, including the Department of Commerce, the Department of Energy, the Department of State, the Department of Treasury, the Nuclear Regulatory Commission, and the U.S. Department of Agriculture. The three principal agencies among these are the Department of State, which administers controls of defense exports through its Directorate of Defense Trade Controls (DDTC), the Department of Commerce, which administers export of commercial, “dual-use” and less sensitive defense items and technologies through the Bureau of Industry and Security (BIS), and the Department of Treasury, which administers exports to embargoed countries and specially designated nationals through its Office of Foreign Asset Controls (OFAC). While the discussion below focuses on these three agencies, it is important to remember that meeting the export requirements of one of these agencies alone is not sufficient, and the applicability of all of these regulations to a specific activity should be evaluated in order to ensure full compliance with the U.S. export control regulations.

In August, 2009, President Barack Obama directed an interagency review of the U.S. export control system and its ability to protect national security and enhance U.S. economic competitiveness. This review concluded that the export control system was overly complicated, overly broad, and with too many redundancies. As a result, in August, 2010, the Export Control Reform initiative was launched. As this initiative moves forward, the regulatory environment for export controls in the U.S. is in a state of flux. Thus, it is important to check the current regulations before engaging in any export controlled activities.
Export Control Laws at UCAR

While UCAR/NCAR/UCP is not a degree granting university, UCAR is a non-profit research institution comprised of a consortium of universities and NCAR is a FFRDC. Many, but not all, export laws, regulations, exemptions, exceptions, and examples that apply to universities also have applicability to UCAR/NCAR/UCP. Therefore, references will be made throughout this export compliance manual to university settings that can also be applied to similar situations at UCAR/NCAR/UCP.

The export control laws apply to many activities at UCAR that do not involve research, and to which you might not expect these laws to apply. For example, just entering into a contract with certain people listed on certain government lists, or sending money to certain countries, may require a license from the U.S. government. As another example, shipping certain items, such as atmospheric instruments, to certain foreign destinations might involve complying with the export control laws.

University collaborators and research institutions in the U.S., including UCAR/NCAR/UCP, have a long tradition of inventing and developing leading edge technologies that are important for national security and economic competitiveness as well as for educating and training scholars from around the world. In recognition of this role, both the Department of State and Department of Commerce export control laws carve out special provisions whereby unrestricted research and classroom teaching activities at universities in the U.S. are excluded from the regulations. As a result, most research activities at UCAR/NCAR/UCP will be “fundamental research” as defined in the export control laws, and, as a result, not require a “license” or permission from the government, and be exempt from the laws in most cases. Nonetheless, it is important to understand the limits on fundamental research in the context of the applicable export control regulations.

The U.S. export control agencies place the burden of understanding and complying with the regulations on the University. Even though most research conducted UCAR/NCAR/UCP facilities will not be subject to export control restrictions, it is important for the research community to be aware of when activities potentially become controlled. Many research institutions accept restrictions on publication and participation in sponsored research, so it is incumbent upon UCAR/NCAR/UCP researchers to verify what, if any, information is export controlled in the conduct of collaborative research with other institutions and to prevent the dissemination of such information at our facilities. The export control laws may apply to research activities on campus if controlled equipment, data, or information is used in the conduct of that research. The export control regulations apply to the export (even temporary)

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of controlled UCAR owned equipment for field research and to the shipment of research materials or equipment to locations outside of the U.S.

The following brief descriptions of the export control laws are meant to be only an overview of the regulations as they impact activities at UCAR. The information should be used with caution, and the UCAR/NCAR/UCP community is encouraged to consult with their ECC (Export Compliance Coordinator) or the export compliance manager in the Office of General Counsel when contemplating new export activities.

**Department of State Regulations (ITAR)**

*Regulatory Authority and Scope*

The Arms Export Control Act (AECA), 22 U.S.C. § 2778 grants authority to the President of the U.S. to designate and control the export and import of defense articles and services. Presidential executive order 11958 delegates this responsibility to the Secretary of State. The Department of State Directorate of Defense Trade Controls (DDTC) administers this authority through implementation of the International Traffic in Arms Regulations (ITAR), 22 C.F.R. §§ 120-130.

The ITAR contains the United State Munitions List (USML), which includes defense articles and related technical data that are controlled for export purposes. In addition to the defense article or related technical data, constituent parts and components of the defense article are controlled under the ITAR. For example, military aircraft are on the USML, as are their engines, electronic controls, and inertial navigation systems, even though such components may have other applications. If a commodity contains a part or component that is controlled under the ITAR, such as a controlled inertial navigation system, then that commodity is also controlled under the ITAR, regardless of whether or not that commodity has an inherently military purpose.

Many items designed for military use are also used for research completely unrelated to that military use. One example at UCAR is thermal imaging cameras, which are used in HAO to study the sun. The thermal imaging cameras are controlled under the ITAR even though they are not being used in a military activity. It is important to understand that the ITAR designation is unrelated to UCAR’s use of a controlled item.

*Important ITAR Definitions*

In order to understand the requirements of the ITAR, it is important to understand terminology specific to the regulation such as “defense article,” “technical data,” and “defense
service.” Additionally, it is important to understand how the ITAR defines “fundamental research” and “public domain” information.

**Defense article** is defined in 22 C.F.R. § 120.6. It means any item or technical data listed on the USML. 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 on the USML. It also includes forgings, castings, and other unfinished products, such as extrusions and machined bodies, that have reached a stage in manufacturing where they are clearly identifiable by mechanical properties, material composition, geometry, or function as defense articles. It does not include basic marketing information on function or purpose or general system descriptions. This definition was updated 10-10-2014.

**Technical data** is defined in 22 C.F.R. § 120.10. It means information 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 or documentation. It includes classified information relating to defense articles and defense services on the U.S. Munitions List and 600-series items controlled by the Commerce Control List, Information covered by an invention secrecy order, and software directly related to defense articles. It does not include information concerning general scientific, mathematical, or engineering principles commonly taught in schools, colleges, and universities, or information in the public domain or telemetry data as defined in note 3 to Category XV(f) of part 121 of this subchapter. It also does not include basic marketing information on function or purpose or general system descriptions of defense articles.

**Defense Service** is defined in 22 C.F.R. § 120.9. The definition includes furnishing of assistance, including training, to a foreign person, whether in the U.S. or abroad, in the design, development, engineering, manufacture, production, assembly, testing, repair, maintenance, modification, operation, demilitarization, destruction, processing or use of defense articles. It also includes providing any foreign person any technical data as defined above.

The ITAR considers fundamental research in science and engineering at accredited institutions of higher learning in the U.S. to be in the public domain, and, therefore, no export license would be needed to export the resulting information abroad, or share it with foreign nationals in the U.S. **Fundamental Research** is defined to mean basic and applied research in science and engineering where the resulting information is ordinarily published and shared broadly within the scientific community, as distinguished from research the results of which are restricted for proprietary reasons or specific U.S. Government access and dissemination controls. University research will not be considered fundamental research if: (i) The University or its researchers accept other restrictions on publication of scientific and technical information
resulting from the project activity, or (ii) the research is funded by the U.S. Government and specific access and dissemination controls protecting information resulting from the research are applicable. (22 C.F.R. § 120.11).

Public Domain is defined in 22 C.F.R. § 120.11. Public domain information is information which is published and which is generally accessible or available to the public. The ITAR describes means by which public domain information might be available, which in addition to libraries, subscriptions, newsstands and bookstores, include published patents and public release at conferences, meetings and trade shows in the U.S. where those venues are generally accessible to the public.

The USML Categories

The USML defines twenty-one classes of defense articles. The USML is found at 22 C.F.R. § 121. In the interest of brevity, only the main headings of the USML categories are listed here. For detailed descriptions of what is included in each category, the ITAR may be accessed online at eCFR.

I Firearms, Close Assault Weapons and Combat Shotguns
II Guns and Armament
III Ammunition / Ordnance
IV Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs and Mines
V Explosives and Energetic Materials, Propellants, Incendiary Agents, and Their Constituents
VI Surface Vessels of War and Special Naval Equipment
VII Ground Vehicles
VIII Aircraft and Related Articles
IX Military Training Equipment and Training
X Personal Protective Equipment
XI Military Electronics
XII Fire Control, Range Finder, Optical and Guidance and Control Equipment
XIII Materials and Miscellaneous Articles
XIV Toxicological Agents, Including Chemical Agents, Biological Agents, and Associated Equipment
XV Spacecraft and Related Articles
XVI Nuclear Weapons Related Articles
XVII Classified Articles, Technical Data and Defense Services Not Otherwise Enumerated
XVIII Directed Energy Weapons
XIX Gas Turbine Engines and Associated Equipment
XX Submersible Vessels and Related Articles
XXI Articles, Technical Data, and Defense Services Not Otherwise Enumerated
Exporting under the ITAR

An export as defined under the ITAR includes sending or taking a defense article out of the U.S., disclosing (including oral or visual disclosure) technical data to a foreign person whether in the U.S. or abroad, or performing a defense service on behalf of a foreign person whether in the U.S. or abroad. (See 22 C.F.R. § 120.17 for a complete listing of export meaning under the ITAR). **This definition is extremely broad. It includes taking controlled technical data out of the U.S. on a laptop computer, regardless of whether or not that information is viewed or accessed while abroad. It also includes allowing a foreign person to view or use a defense article in the U.S. Most exports of defense articles and defense services must be licensed by DDTC.**

Generally, a U.S. person that manufactures, brokers or exports defense articles or services must be registered with DDTC. Registration is required prior to applying for a license or taking advantage of some license exemptions. Registered entities may apply for licenses, or permission, to export defense articles and defense services. DDTC reviews license requests on an individual basis, and consults with other agencies, such as the Department of Defense in consideration of the request. Exports of ITAR controlled items are prohibited to some countries and individuals. The list of proscribed destinations may be found at [http://www.pmddtc.state.gov/embargoed_countries/index.html](http://www.pmddtc.state.gov/embargoed_countries/index.html).

Commodity Jurisdiction

The DDTC has the responsibility to determine if an item or technology falls within the scope of the ITAR or if the item/technology is under the jurisdiction of the Department of Commerce for the purposes of export controls. While it is possible to self-classify an item, DDTC should be consulted if there is any doubt as to whether an article or service is subject to the ITAR. At UCAR, the Export Compliance Manager will coordinate the submission of commodity jurisdiction requests as well with the determination of any export licensing requirements.

Department of Commerce Regulations (EAR)

Regulatory Authority and Scope

The EAR controls the export of “dual use” items, which are items that have civilian uses, but which may also have military or other strategic applications. Common, real-life examples from UCAR include certain chemicals, as well as laboratory equipment such as sensors, computers, servers, and lasers. These items are classified on the Commerce Control List (CCL). The CCL is a “positive list”; in other words, if an item is NOT listed on the CCL, then, generally, the EAR does not apply. The EAR also controls the export of purely commercial commodities in support of U.S. trade and embargo policies. Purely commercial items are classified as EAR99 and have very few export restrictions. The current export reform initiative will also move some
less sensitive military items from the ITAR to the EAR with a proposed Commerce Munitions List.

Many activities are not subject to the EAR. In addition to activities subject to the exclusive authority of another agency, e.g. the export of a defense article which is controlled under the ITAR, the EAR lists several exclusions from the regulations. These include published information, information resulting from fundamental research, educational information, and the export or reexport of items with less than de minimis U.S. content (where applicable). It is important to understand the definitions and limitations of each of these exclusions in order to correctly evaluate their applicability to specific activities.

Important EAR Definitions and Concepts

**Export** is defined in 15 C.F.R. § 734.2(b) as an actual shipment or transmission of items subject to the EAR out of the U.S. as well as the release of technology or software subject to the EAR in a foreign country or to a foreign national either in the U.S. or abroad.

**Deemed Export** is defined in 15 C.F.R. § 734.2(b)(2)(ii). A deemed export is any release of technology or source code subject to the EAR to a foreign national, regardless of location. The release is deemed to be an export to the home country or countries of the foreign national. For the purposes of the EAR, legal U.S. permanent residents, naturalized citizens, and individuals protected under the Immigration and Naturalization Act (8 U.S.C. § 1324b(a)(3)), are not considered to be foreign nationals.

**Reexport** means an actual shipment or transmission of items subject to the EAR from one foreign country to another foreign country. It also means the release of technology or software subject to the EAR to a foreign national outside the United States (deemed reexport). Reexport is defined in 15 C.F.R. § 734(b)(4).

**De Minimis U.S. content** is the amount of U.S. content, as determined by percentage of value of the U.S. content in the end item, required to make a foreign produced item subject to the EAR. For some items, there is no de minimis content, meaning that any U.S. content will make the foreign-produced item controlled under the EAR. For other items the de minimis U.S. content for foreign produced items may be 10% or 25% of the total value. See 15 C.F.R. § 734.4 for a complete discussion of the de minimis U.S. content rules.

**Published Information and Software** is defined in 15 C.F.R. § 734.7. Information is published when it is accessible to the interested public in any form. Publications may take the form of periodicals, books, print, electronic, public web sites, or any other media available for general distribution. General distribution may be defined as available to an interested community, such as a technical journal available to scientists in a relevant field, so long as the price charged for the publication does not exceed the cost of reproduction and distribution.
Articles submitted to journals for consideration for publication are considered to be published, regardless of whether or not they are accepted. Published information also includes information readily available in libraries (including university libraries), as well as patents and published patent applications. Finally, release of information at a conference open to the participation of all technically qualified persons, is considered to be publication of that information. Software is published when it is available for general distribution either free or at the cost of distribution. However, strong encryption software remains controlled, regardless of general availability.

**Fundamental Research** is basic and applied research in science and engineering, where the resulting information is ordinarily published and shared broadly within the scientific community. Such research can be distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary reasons or specific national security reasons . . . The complete definition and discussion of fundamental research, including University based research is found at 15 C.F.R. § 734.8. University research is considered to be fundamental to the extent that researchers do not accept restrictions on the publication of scientific and technical information resulting from the research. Temporary delays in publication for the protection of sponsor proprietary information do not remove research from the fundamental domain. However, if that sponsor’s proprietary information is subject to the EAR, then that information remains subject in the conduct of the research.

**UCAR/NCAR/UCP researchers receiving proprietary information from corporate research sponsors should consult the Export Compliance Manager in the Office of General Counsel to ensure compliance with the EAR in the conduct of the related research.**

**The Commerce Control List**

The CCL is found at 15 C.F.R. § 774, which may be accessed at through the eCFR. Items included on the CCL are assigned an export control classification number (ECCN) based on a category and product group. There are 10 categories, numbered 0 – 9, and five product groups, labeled A- E, within each category. The category and product group generally describe the item being classified, and the remaining three digits of the ECCN relate to the item specifications. An ECCN follows the nomenclature of “#a###”, where the first “#” is the category, “a” is the product group, and “###” identifies the reasons for control. In general, “###”, with lower numbers are controlled to more destinations than those with higher numbers. The categories and product groups are as follows:

**Commerce Control List Categories**

0 = Nuclear materials, facilities and equipment (and miscellaneous items)

1 = Materials, Chemicals, Microorganisms and Toxins
Export Compliance Program Manual 1-31-2020

2 = Materials Processing
3 = Electronics
4 = Computers
5 = Telecommunications and Information Security
6 = Sensors and Lasers
7 = Navigation and Avionics
8 = Marine
9 = Aerospace and Propulsion

Product Groups

A. Systems, Equipment and Components
B. Test, Inspection and Production Equipment
C. Material
D. Software
E. Technology

The EAR export licensing regime is much more flexible than that of the ITAR. Under the EAR, licensing requirements for export activities depend on what is being exported, the export destination, who will be using it, and what it will be used for. ECCN entries include a listing of the reasons for control that can be used in determining if an export license is necessary. While the most common controls are for anti-terrorism and national security, many other potential controls exist. The complete list of controls is found in 15 CFR§ 742. The control list can be matched to the country chart to make a determination of whether or not a license is required and if an applicable license exception is available.

License Exceptions

While the CCL is much more extensive than the USML, many fewer licenses are required for items controlled under the EAR than under the ITAR. This is because of the many license exceptions that may be available for EAR controlled exports. It is important to understand that
there are limitations on the use of license exceptions (see 15 C.F.R. § 740.2), and that the use of a license exception may have an associated recordkeeping and notification requirement. More than one license exception may be available for a proposed activity. In such cases, the use of the exception with the fewest restrictions on use and least notification and recordkeeping requirements minimizes compliance burden. Members of the UCAR community are encouraged to consult with the export compliance office when making decisions as to the applicability of EAR license exceptions for proposed export activities.

A complete listing of EAR license exceptions may be found in 15 C.F.R. § 740. Exceptions commonly applicable to members of the UCAR/NCAR/UCP community travelling abroad are BAG, which applies to personally-owned items taken abroad for personal use while abroad, and TMP, which applies to the temporary export of UCAR-owned equipment, including laptop computers and other equipment listed on the CCL, for work-related activities, including professional presentations, teaching, and field research. It is important to note that there are limitations on the use of the TMP license exception; items must be returned to the U.S. within one year of export, or if not returned, documentation of disposal is required. Items exported using the TMP license exception must be kept under the effective control of the traveler while abroad. Additionally TMP is not applicable to some restricted locations, such as Cuba.

Commodity Classification

BIS encourages exporters to use the detailed descriptions in the CCL to self-classify items to be exported. However, in the event of an incorrect classification, the exporter is liable for any resulting violations of the EAR and may be subject to resulting penalties. Self-classification may be particularly difficult in the university and research environment where cutting edge-research pushes the boundaries of existing technologies, and in fact may not precisely meet the technical specifications as described in the existing CCL listings. When unsure about a self-classification, the exporter may submit the item/technology to BIS for a formal classification. Members of the UCAR/NCAR/UCP community who need assistance with classifying items should contact his/her ECC, the Logistics Manager, or the Export Compliance Manager.

Anti-Boycott Restrictions

The Anti-Boycott provisions of the EAR were designed and implemented to address foreign governments’ boycott of countries friendly to the U.S. The provisions were first implemented in response to the Arab League Boycott of Israel. As of February, 2012, Arab Countries including Kuwait, Lebanon, Libya, Qatar, Saudi Arabia, Syria, the United Arab
Emirates, and Yemen continue to impose boycott restrictions on Israel and companies that do business with Israel. Such companies are “blacklisted” under the boycott.

The anti-boycott provisions are found in 15 C.F.R. § 760. The provisions apply to any person or entity in the U.S. as well as to U.S. persons or entities abroad. For example, UCAR is a U.S. person because it is located and organized under U.S. law. The anti-boycott provisions specifically prohibit the following activities:

- Agreement to refuse or actual refusing to do business with a boycotted country or with blacklisted person
- Agreement to discriminate or actual discrimination against other persons based on race, religion, sex, national origin, or nationality (for example, agreeing to refuse to hire Israeli nationals)
- Providing information about race, religion, sex, or national origin of another person
- Furnishing information about business relationships with boycotted countries or blacklisted persons (for example, providing information about current or previous business in Israel)
- Furnishing information about membership concerning associations with charitable and fraternal organizations
- Paying or otherwise implementing letters of credit containing prohibited conditions or requirements.

Exceptions to these prohibitions exist but are limited. Additionally, U.S. persons asked to engage in the prohibited activities are required to report the request to BIS. If you encounter boycott language in a UCAR activity, please contact the Export Compliance Manager for assistance in determining whether an exception is applicable and if reporting to BIS is required.

Department of Treasury Regulations (OFAC)

Regulatory Authority and Scope

The Office of Foreign Asset Controls (OFAC) administers and enforces economic and trade sanctions based on U.S. foreign policy and national security interests. Many of the sanctions are based on United Nations and other international mandates. Sanctions are country/program specific, and are subject to frequent change based on the changing geopolitical landscape. In addition to foreign countries and regimes, OFAC imposes sanctions on individuals, such as people the U.S. government deems to be terrorists and narcotics traffickers.

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2 [https://www.federalregister.gov/articles/2012/02/13/2012-3090/list-of-countries-requiring-cooperation-with-an-international-boycott](https://www.federalregister.gov/articles/2012/02/13/2012-3090/list-of-countries-requiring-cooperation-with-an-international-boycott)
The implementing regulations for the OFAC sanctions are found in 31 C.F.R. §§ 500-599, the Foreign Asset Control Regulations.

The OFAC sanctions broadly prohibit most transactions between a U.S. person and persons or entities in an embargoed country or who have been declared specially designated nationals (SDNs). The prohibition generally includes importation and exportation of goods and services as well as related financial transactions or engaging in business activities with SDNs. As of March 2016, OFAC sanctioned countries include the Balkans, Belarus, Burma, Burundi, Central African Republic, Cote d’Ivoire, Cuba, the Democratic Republic of Congo, Iran, Iraq, Lebanon, the Former Liberian Regime of Charles Taylor, Libya, North Korea, Somalia, Sudan, South Sudan, Syria, Ukraine, Venezuela, Yemen, and Zimbabwe. Additional activity based sanctions programs include Counter Narcotics Trafficking, Counter Terrorism, Non-Proliferation, and Transnational Criminal Organizations sanctions as well as the Rough Diamond Trade Controls. The activity based sanctions programs are implemented through the designation of individuals engaging in the banned activities as SDNs.

**OFAC Licensing for Country Based Programs**

It is important to review the specific sanctions program before conducting activities with an OFAC sanctioned entity or person, or in an OFAC-sanctioned country, such as Cuba. The individual sanctions specifically describe what activities are exempt from the embargo (for instance personal communications, exchange of informational materials, etc.) as well as what activities may be permitted under an applicable license. Activities which are permitted under a general license do not require specific permission from OFAC prior to engaging in the activity; however, the conditions of a general license must be carefully reviewed and the use of the general license documented. Activities that do not fall under an available general license may be eligible for a specific license from OFAC. Specific license requests must be submitted and approved by OFAC prior to engaging in the sanctioned activity. Activities conducted under both general and specific licenses are subject to OFAC audit, and records must be maintained for five years after the conclusion of the activity. At UCAR, the Export Compliance Manager should be contacted when considering any proposed OFAC sanctioned activities.

**Penalties for Export Violations**

Violation of the export control laws can result in both civil and criminal penalties including fines and imprisonment. Although there is a maximum amount for a civil or criminal penalty, the actual penalty is often multiplied. For instance, if multiple unauthorized shipments of the same item to the same end user were completed, each individual shipment could potentially incur the maximum penalty. Even a single unauthorized export may result in multiple violations (e.g. export without a license, false representation on shipping documents, acting with knowledge of a violation, etc.). Maximum penalties for violations under the OFAC,
ITAR and EAR are $1,000,000 and criminal prison sentences can be up to 20 years for individuals engaging in the violations. Violation of the export control laws may result in the loss of future export privileges (EAR) or even from debarment from participation in future federal contracts (ITAR).

In assessing penalties, DDTC, BIS, and OFAC will consider mitigating factors. Mitigating factors include whether the disclosure of the violation was made voluntarily, whether the violation is an isolated incident or part of a pattern of continuing behavior, whether the company had a compliance program in place at the time of the violations, whether steps were taken to improve the compliance program after the discovery of the violation and whether the violation was due to inadvertence, mistake of fact, or a good faith misinterpretation of the laws.

Violations of export control laws discovered at UCAR should be reported to the Export Compliance Manager or to the Office of General Counsel. Additionally, UCAR’s Ethics compliance website (http://www.fin.ucar.edu/ethics/anonrpt.html) is available for confidential reporting of suspected violations. Most importantly, if there is a question as to whether an activity would be a violation of the export control laws, it is important to consult with export compliance coordinators or the Export Compliance Manager prior to engaging in the activity.
Commitment to Export Control Compliance

**UCAR must comply with all applicable U.S. government export regulations.** The vast majority of research activity at UCAR falls within one or more of several exemptions and exclusions from licensing requirements. However, it is important to understand how the laws apply to activities at UCAR/NCAR/UCP as well as the corresponding compliance obligations, which may extend to documenting the applicable licensing exception(s).

The U.S. government defines exports to include not only tangible or “physical” items such as biological materials, chemicals, and equipment, but also intangible information which may include research data, formulae, engineering designs and ideas. Furthermore, an export is defined not only as an actual physical shipment, but also includes electronic and voice transmissions out of the United States (e.g. email or a phone call to a colleague at a foreign institution or remotely accessing controlled documents while travelling internationally). Exports also include the release of technology to foreign nationals within the U.S., the provision of training or services involving controlled equipment to foreign nationals in the U.S. or abroad, and engaging in transactions or providing services to entities and individuals who are on embargo or specially designated nationals lists.

Exports are controlled by multiple federal agencies including: the Department of State through the International Traffic in Arms Regulations (ITAR), the Department of Commerce through the Export Administration Regulations (EAR), and the Department of Treasury through the Office of Foreign Assets Control (OFAC). Each agency has its own procedures for enforcement, but violations of any of these regulations can result in significant institutional and personal penalties including fines of up to $1,000,000 per violation, incarceration for up to 20 years, and the loss of future exporting privileges.

UCAR is committed to the preservation of research freedom. However, UCAR recognizes its obligation to comply with the U.S. export control regulations. Fortunately, most, but not all, research activities at UCAR facilities fall under the “fundamental research exemption”, which provides that basic and applied research activities NOT subject to publication or access restrictions will not be subject to export controls. Other exemptions apply to information shared in the conduct of research activities at our facilities IN the U.S. as well as to information that is already publicly available. The export regulations are complex and continually changing, so it is important to consider each activity on an individual basis.

UCAR’s Export Compliance Manager in the Office of the Chief Operating Officer is responsible for helping the organization understand and comply with the export control laws,
and assisting with the applications for an export license when necessary. Please see [http://president.ucar.edu/counsel/export-compliance](http://president.ucar.edu/counsel/export-compliance) for additional information including analytical tools to assist you in determining if and how the regulations apply to an activity, as well as points of contact for assistance with export control matters. Questions regarding export control laws or procedures for compliance at UCAR may be addressed to the Export Compliance Manager at 303-497-8898 or export@ucar.edu.

**Roles and Responsibilities for Export Compliance at UCAR**

The Roles and Responsibilities matrix for ensuring compliance with export control laws at UCAR is included as Appendix 1. While it is the responsibility of senior management and to ensure the existence of adequate resources and management support to comply with the export control regulations and to resolve identified export control issues, the discussion below focuses on other key roles in export compliance at UCAR.

**Empowered Officials (EOs)**

UCAR’s Chief Legal Officer is the organization’s Senior Empowered Official. In addition, there is an Empowered Official in Logistics Operations and Empowered Officials in the labs with the most export activity. In this capacity, the Empowered Officials have the authority to represent UCAR before the export control regulators in matters related to registration, licensing, commodity jurisdiction and classification requests, and voluntary or directed disclosures. While certain oversight functions may be delegated, only Empowered Officials may sign paperwork and bind UCAR in any proceeding before DDTC, and only specific individuals are authorized to interact with BIS, OFAC, or any other government agency with export control responsibilities.

**Export Compliance Program Manager (ECPM)**

The Export Compliance Program Manager, together with the Export Compliance Coordinators (ECCs) and senior management:

1. identifies areas at UCAR that are impacted by export control regulations;
2. develops export control procedure guidance to assist UCAR in remaining in compliance with export control regulations;
3. educates principal investigators, other researchers, and administrative support staff in labs/programs about export control regulations and procedures;
4. educates others at UCAR such as Contracts, Purchasing, Travel, Visit Coordinators, postdoc program placement programs, special visitor and student intern programs, and Human Resources about export control regulations and procedures at UCAR;
5. monitors and interprets export control legislation;
6. works with others such as the Export Compliance Coordinators to facilitate understanding and compliance with export controls;
7. assists investigators, researchers and offices at UCAR/NCAR/UCP when research involves export controlled equipment or information;
8. seeks advice from the Office of General Counsel in analyzing and handling export control compliance issues;
9. assists the PI and ECC in developing a technology control plan for research involving export controlled items or information to ensure compliance with export control regulations;
10. applies for export licenses from BIS via SNAP-R, commodity jurisdiction and commodity classification requests;
11. advises and assists with record keeping for export controlled activities at UCAR;
12. maintains the export controls website.

Export Compliance Coordinators (ECCs)
The Export Compliance Coordinators are individuals appointed from labs/programs and business units across UCAR to assist the Export Compliance Manager in identifying training needs, identifying potential export control issues, and to serve as local points of contact for questions related to export controls. The ECCs are trained and have access to software to perform restricted party screening. The ECCs meet with the Export Compliance Manager on a regular basis to promote the export compliance program at UCAR.

Logistics
Shipment of items controlled under the ITAR or EAR should be clearly marked as controlled with the appropriate regulatory control cited. It is UCAR policy that international shipments be routed through Logistics. Technical data transfers pursuant to existing TAAs, and documents not subject to export controls are the only exceptions. Any licensed export, as well as exports with a dollar value greater than $2500 must be entered into the Department of Census Automated Export System (AES) prior to the export of the item or information. While commercial freight forwarders will usually handle the AES entry, the Logistics Office is able to assist the UCAR/NCAR/UCP community for the export of items being hand-carried or technical data being mailed or electronically transmitted.

Contracts Office
UCAR’s Contracts office provides assistance and expertise in export compliance by working closely with the Export Compliance Manager in identifying export control issues and providing support for their solution. The Contracts office has the sole authority to bind UCAR to research related agreements on behalf of UCAR.

Contracts office:
1. reviews terms of sponsored program agreements, material transfer agreements and other non-monetary agreements to identify restrictions on publication and dissemination of research results and to negotiate out such restrictions;

2. provides assistance to PI in identifying international components of sponsored program agreements, identifying potential export control issues in the proposed international component and verifying that the international entities and individuals are not restricted parties or specially designated nationals;

3. communicates identified potential export control issues to the PI, ECC, and the Export Compliance Manager;

4. communicates with the Export Compliance Manager and ECC about any changes in awards that necessitate another review of the project for export controls.

**Lab/Program Administrators**

The lab and program administrators work closely with ECCs, EOs, ECM, Contracts, and the PI. Together they:

1. provide assistance to PIs in reviewing terms of sponsored program agreements, material transfer agreements and other non-monetary agreements to identify restrictions on publication and dissemination of research results and flag such restrictions in agency requests for proposals;

2. provide assistance to PI in identifying international components of sponsored program agreements, identifying potential export control issues in the proposed international component;

3. communicate identified potential export control issues to the PI, ECC and the Export Compliance Manager;

4. communicate with the ECCs, Export Compliance Manager, and Contracts about any changes in awards that necessitate a re-review of the project for export controls.

The lab/program administrators also assist in ensuring compliance with export control regulations by identifying potential export issues with activities in the lab/program projects. Such issues may include reviewing invoices for statements that items may not be exported, ensuring international shipping is compliant with export control laws, ensuring that payments do not go to, or contracts are not entered into, with anyone on the Specially Designated Nationals (SDN) list, ensuring that international travel is compliant with applicable export control regulations, and ensuring that visa export certification information has been properly reviewed and completed.

**Principal Investigators**

PIs have expert knowledge of the type of information and technology involved in a research project or other university activity, such as presenting at conferences and discussing
research findings with fellow researchers or collaborators. PIs must ensure that they do not disclose controlled information, such as information that has been provided to them under a corporate non-disclosure agreement, or transfer controlled articles or services to a foreign national without prior authorization as required. Each PI must:

1. understand his/her obligations under the export control laws;
2. assist his/her ECC and the Export Compliance Manager in correctly classifying technology and items that are subject to export control laws;
3. assist in developing and maintaining the conditions of a technology control plan for any activity, data or equipment where the need for such a plan is identified;
4. in coordination with his/her ECC and lab/program administrator ensure that research staff and visitors have been trained on the technology plan and on the export control regulations should any apply.

Export Compliance Evaluations
An export compliance evaluation should be performed when a PI submits a proposal, receives an award, or changes the scope of an existing project.

ECCs coordinate with PIs to perform an initial review of the request for proposal, broad agency announcement or award. A decision tree is available to help identify potential export control issues. The ECCs and Contracts staff are trained to identify the following red flags which indicate the possible presence of export control issues:

1. references U.S. export control regulations (beyond a mere statement to comply with the law);
2. restricts access or participation based on country of origin;
3. restricts the use of proprietary or confidential information;
4. grants the sponsor pre-publication review and approval for matters other than the inclusion of patent or sponsor proprietary/confidential information;
5. allows the sponsor to claim the results or data generated in the agreement as proprietary or trade secret;
6. involves export controlled equipment (if known);
7. includes foreign sponsors or collaborators;
8. travel, shipping, or work outside of the United States;
9. military applications of project results.

All non-U.S. persons and entities are screened against the specially designated and restricted parties lists. Export controlled equipment, data, or technology is identified and referred to the Export Compliance Manager.
Technology Control Plans (TCP)

When export controlled equipment, data, or technology is identified for a project, the ECC and Export Compliance Manager will work with the PI to develop and implement a TCP to appropriately secure the equipment, data, or technology from access by unlicensed non-U.S. persons. The TCP will include:

1. a commitment to export control compliance;
2. identification of the applicable export controls and items or technologies subject to the controls;
3. a description of the agreed upon security measures to control the item/technology including as appropriate:
   a. Laboratory compartmentalization
   b. Time blocking
   c. Marking
   d. Locked storage
   e. Electronic security
   f. Confidential communications;
4. identification and nationality of each individual who will have access to the controlled item or technology;
5. personnel screening measures for granting access to the controlled item/technology;
6. appropriate security measures for disposal of the item/technology when use is complete.

Before any individual may have access to export controlled items or technology, he or she must be informed of the conditions of the TCP and agree to comply with the security measures outlined in the TCP.

Licensing

Licenses from OFAC may be required in support of international activities in embargoed countries. In the event that an OFAC license is required, the application is completed, in very close cooperation with the Export Compliance Manager, by the individual needing the license. Licenses from the Department of State or the Department of Commerce may be required for the export of UCAR owned equipment in support of international activities. Additionally, export licenses may be required in order for foreign nationals to access controlled items or technology at UCAR. The Empowered Officials are the individuals at UCAR authorized to apply for Department of State ITAR licenses. In the event that an ITAR license is required, the EO with the advice of the Export Compliance Manager and the Office of General Counsel as required will prepare and sign the necessary documentation for preparing the license request. The EO will be responsible for maintaining records associated with license requests. Copies should be
provided to the Export Compliance Manager and the Logistics Manager as appropriate. In the event that a Department of Commerce BIS license is required, ECCs will work with the Export Compliance Manager or Logistics Manager to prepare the application with the Department of Commerce.

UCAR personnel who are unsure about licensing requirements for proposed international activities or the use of controlled equipment by foreign nationals should consult with the Export Compliance Manager prior to engaging in the activity.

**Training**

Training is the foundation of a successful export compliance program. Well-informed employees minimize the likelihood that inadvertent violations of the law will occur. The greatest risk of non-compliance of export laws and regulations occurs during casual conversations in person, on the telephone, or via e-mail. The way to prevent these types of violations is through awareness and training.

The Export Compliance Manager will prepare updated training materials and will ensure that employees engaged in export controlled activities receive the appropriate briefing. The ECM will also maintain records of training or briefings provided. In addition to in person training sessions, training on export controls is available online 24/7 in the Workday Learning system maintained by HR. The ‘Introduction to Export Controls’ modules in Workday Learning takes approximately 1 hour to complete and fulfill UCAR’s requirement for mandatory export controls training as outlined in UCAR Export Policy and Procedure 1-6. Additional resources addressing special topics are available on the export control web page found at [http://president.ucar.edu/counsel/export-compliance](http://president.ucar.edu/counsel/export-compliance).

The ECCs will assist the Export Compliance Manager in implementing the export compliance training sessions or briefings relative to their respective labs/programs, and departments. ECCs will work with senior management as necessary to implement export training to fit the individual group needs.

**Recordkeeping**

The ITAR, EAR and OFAC regulations all stipulate record keeping requirements for regulated export activities. Under each of these sets of regulations, records must be retained for five years after the completion of the activity and made available to the regulating authority upon request. Records that should be retained include all memoranda, notes, correspondence (including email), financial records, shipping documentation, as well as any other information related to the export activities. Additionally, when a license exception (EAR) or license exemption (ITAR) is used, additional records documenting the applicability of the
exception/exemption may be required and in some cases there may be additional reporting requirements.

UCAR’s policy is to maintain export-related records based on individual controlled items or activities. Unless otherwise provided for or instructed by the Export Compliance Manager or the Office of the General Counsel, all records shall be maintained consistent with the UCAR record retention policy, and shall be retained no less than five years after the TCP termination date or license termination date, whichever is later. Creators of the original records are the owner of the records and are responsible for records retention and retrieval if necessary.

If ITAR-controlled technical data is exported under an exemption, certain records of the transaction must be kept. Those records include:

a description of the unclassified technical data;

the name of the recipient /end-user;

the date / time of export;

the method of transmission (e.g., e-mail, fax, telephone, FedEx); and

the exemption under which the export took place.

Note that information which meets the criteria of being in the public domain, being educational information, or resulting from Fundamental Research is not subject to export controls under the ITAR. Therefore, the special requirement for recordkeeping when using an exclusion, exception, or exemption may not apply. However, it is a good practice to provide such description for each export to establish a record of compliance.

BIS has specific record-keeping requirements. Generally, records required to be kept by EAR must be kept for a period of five years from the last export date. However, if BIS or any other government agency makes a request for such records following a voluntary self-disclosure, the records must be maintained until the agency concerned provides written authorization otherwise.

**Monitoring and Auditing**

In order to maintain UCAR’s export compliance program and to ensure consistent adherence to U.S. export laws, the Export Compliance Manager, UCAR’s Internal Auditor, or the Office of General Counsel with the assistance of the ECCs may conduct internal reviews of TCPs

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3 See 22 C.F.R. §§ 122.5 and 123.26.
4 See 15 C.F.R. § 762.6.
and export records. The purpose of the reviews is: (i) to identify possible violations; and (ii) to identify deficiencies in training, procedures, etc. that can be rectified.

**Detecting and Reporting Violations**

Any individual who suspects a violation has occurred must immediately notify the Export Compliance Manager, the Office of General Counsel, or an anonymous report can be made via the Ethics compliance website. The Export Compliance Manager will work with OGC to determine the appropriate follow-up to the notification, which may include a voluntary self-disclosure to the government. The senior empowered official may send an initial notification about the suspected violation to the appropriate government agency. The Export Compliance Manager, assisted by OGC, will conduct an internal review of the suspected violation by gathering information about the circumstances, personnel, items, and communications involved. Once the review is complete, the Export Compliance Manager may provide the government agency with a supplementary letter with a thorough narrative account of:

1. the project’s description and background;
2. a description of the suspected violation;
3. which items and controlled categories were involved;
4. which dates the violations occurred on;
5. which countries were involved;
6. who was involved and their citizenships;
7. an explanation of why the alleged violation occurred;
8. any corrective actions taken; and
9. UCAR’s commitment to export controls compliance.

Once the initial notification and supplementary letter have been sent, UCAR will follow the government agency’s instructions.

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5 For EAR violations, see 15 C.F.R. § 764.5. For ITAR violations, see 22 C.F.R. § 127.12(c).
## Glossary of Abbreviations

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<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AECA</td>
<td>Arms Export Control Act</td>
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<td>AES</td>
<td>Automated Export System</td>
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<td>BIS</td>
<td>Bureau of Industry and Security</td>
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<td>CCL</td>
<td>Commerce Control List</td>
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<td>DDTC</td>
<td>Directorate of Defense Trade Controls</td>
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<td>EAR</td>
<td>Export Administration Regulations</td>
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<td>ECCN</td>
<td>Export Control Classification Number</td>
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<td>ITAR</td>
<td>International Traffic in Arms Regulations</td>
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<td>OFAC</td>
<td>Office of Foreign Asset Controls</td>
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<td>SDN</td>
<td>Specially Designated National</td>
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<td>TCP</td>
<td>Technology Control Plan</td>
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<td>USML</td>
<td>United States Munitions List</td>
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