18 June 2018

RE: Updates on restricted research and export laws

Dear Colleagues,

The Export Compliance Office provided this Q and A below to help researchers understand how US export laws can impact research projects w/ sponsor-required security restrictions.

Please read this if you participate in applied research in sensitive technologies, especially research funded by the Department of Defense.

What does it mean to be "export controlled"?

US export laws control the transfer of goods and technologies out of the US. Sensitive technologies may require an export license to send to a foreign location. For example, if I have a forward-looking infrared sensor (FLIR) and I want to ship it to Canada, I may need to get an export license to send it out of the US (depending on the performance of the sensor). The technical data (that would tell you how to make the sensor) is also controlled by export laws. In the sensor example, if I have technical data on the sensor, sharing it with a student who is a citizen of Canada, would be considered an "deemed export" to Canada.   ALL items in the US are export controlled at some level but the requirement for a license varies depending on the sensitivity of the items.

The most sensitive items for export control are items and technology that have a military use. Military items are controlled by the International Traffic in Arms Regulations (ITAR) (US Dept of State) and generally require a license to be exported to any country or provided to any non-US person (Citizen and Green card holders are considered "US persons by export law). Commercial items are controlled by the Export Administration Regulations (EAR) (Dept of Commerce). The licensing requirement for commercial items depends on the sensitivity of the item.

What are the penalties for export violations?

Severe penalties including multi-million dollar fines and imprisonment can result from "exporting" an item or data without a license. In addition to the personal liability the institution can face reputational harm, fines, and potential suspension from receiving federal funding.

Is my research export controlled?

It depends! Are you shipping things out of the country? Then Yes.
What about the "deemed export"? Export laws contain a written exception for "fundamental research" which is defined as "*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.*"   In other words, if you are doing research that will eventually be published, the data is exempt from the regulations, even before it is published. This is why we can have foreign students in our labs and we don't need an export license because the data is exempt from the law. **HOWEVER**, there is a very specific caveat written into the law for this exemption. The following is verbatim from the ITAR:

> 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 or 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.

You may have heard of instances where research contracts get held up in Office of Research Administration (ORA) for export controls. If ORA accepts a contract with terms that require a review and approval for publication or a US citizen restriction on the researchers (for security reasons), this would preclude the fundamental research exception and the research data would become subject to export control. The most common publication restriction we see is in DoD-funded contracts: **252.204-7000 Disclosure of Information.** A contract funded by industry could also become export controlled if the sponsor would like to consider all research results proprietary (unless this is temporary while awaiting patent protection). We also occasionally see DoD-funded contracts (or subcontracts) that require the research team to be US citizens. This would also violate the fundamental research exclusion and University policy on open research.

My research is not Classified so it's not export controlled, right?

Classification and export control are two different things implemented by different sets of laws. Classified information is controlled at a higher-level than export controlled. A security clearance is required to access classified information but not export-controlled. Classified information can be but is not necessarily export controlled. Export controls are always specific to technologies.

Can I participate in classified or export-controlled research (a.k.a. "restricted research") on campus?

As mentioned above, the University System has a policy: IV-2.20-POLICY ON CLASSIFIED AND PROPRIETARY WORK. In general, classified research and research with publication approval requirements are prohibited by the policy unless "under highly unusual circumstances" the President grants a waiver to the policy. The Policy lists the following items which must be considered prior to granting a waiver:

> *a) The proposed work fits within the institution mission and meets its ethical standards;*
> *b) National interests (security, public health, etc.) have been considered;*
> *c) Any classified or proprietary work restrictions will not adversely affect the academic progress of any student involved in the work;*
> *d) Any faculty member involved in the work understands the implications of performing work that may not be immediately publishable in a publicly available format, and possible impact on academic/professional progress;*
> *e) All research policies and procedures, including general safety and security, Institutional Review Board (IRB), Institutional Animal Care and Use Committee (IACUC), environmental considerations, and IT and data security have been carefully evaluated and appropriately articulated in the agreement;*
> *f) Proper documentation is provided that protects the institution, and accepted security measures are put in place to assure that any on-campus work does not place the institution at undue risk; and*
> *g) Other special circumstances relevant to a specific project or program are documented.*

At UMCP, the Division of Research has initiated a process, at the direction of the UMD Senate, to help PI's interested in getting a waiver, make the request, and to help Administrators ensure the project meets the criteria in the policy (above). To learn more about the waiver process, contact the Export Compliance Office (export@umd.edu or afgrant@umd.edu).

How is restricted research different from my normal research?

If the restricted research involves a technology, the materials and resulting technical information would become export controlled. In other words, if a non-US person has access to the research data or prototypes, that access might be considered a deemed export. Because of the severe penalties for export violations, export-controlled

research is generally conducted in high-security environments to minimize the risk of an unauthorized export. Think of the DoD contractor facility such as Lockheed or Raytheon. They generally have keycard or guarded access and only allow US persons into their facilities. Similarly, their IT systems are heavily controlled with extensive security features designed to prevent unauthorized access. This environment is very different than the typical university lab. For this reason, applications for waivers are looked at very closely to determine whether the PI and department have the physical security and IT resources in place to protect the research. At a minimum, an access-controlled lab and secure server should be required. The standard computing architecture at the University would not meet the IT security standards being invoked in DoD contracts for restricted research (see NIST 800-171). These security features, especially data, can be very costly and should be budgeted for in the planning phases if the PI would like to pursue. This is not research as usual.

How do I recognize restricted research in the funding announcements?

Typically, the DoD will write into their funding announcements whether the research will be restricted or not. Research funding from 6.1 or 6.2 funding supplies is intended to be set aside for fundamental (unrestricted) research where 6.3 and higher is usually restricted. Contracts are far more likely than grants to contain restrictions. DARPA typically writes the determination into Section II of their funding announcements. In some cases, DARPA requires proposers to indicate whether they are bidding fundamental or restricted research. A word search for *fundamental research* or *export control* will often help determine whether an announcement contains restrictions. It's important for Investigators to identify whether an opportunity contains restrictions before beginning a proposal so that the PI can work with the Export Compliance Office to identify a strategy. One approach might be to request that the sponsor allows the University research to be performed as fundamental research. If this does not seem likely, the PI and the Export Compliance Office can decide whether it makes sense to proceed as a restricted research project. If identified as restricted research during the proposal phase, it may be possible to propose direct costs to cover the additional IT system costs. In cases where the sponsor restrictions are not discovered until award, ORA and the Export Compliance Office will attempt to negotiate out the restrictions, or work with the PI to determine whether restricted research is an option.

What is the timeline for getting a restricted research waiver?

The waiver itself is similar to an IP waiver in that it has to be signed by the PI and then routed for Chair, Dean, VPR approval but some extra time may be required for the President's approval. Although the planning for the waiver can be done in advance, the request isn't routed until notice of contract award is received. While the form might take 1-2 weeks, the real effort is in the planning for the IT and physical security controls. The Export Compliance Office will work with the research team to set up a Technology Control Plan ("TCP") which identifies the physical and data security infrastructure, ID's the authorized personnel, and establishes a training requirement. The Export Compliance Office can provide the blank template for the waiver and TCP.

Where can I find more information?

The Export Compliance Office has additional information on their website: https://research.umd.edu/eco. The Export Compliance Officer, Adam Grant, is happy to provide direct training to researchers, faculty, and department administrators. Adam can also provide briefs at department meetings and other events. Adam can be reached at afgrant@umd.edu.

For questions specific to the IT system requirements for restricted research, the following individuals are familiar with the NIST 800-171 requirements and can help discuss your system needs:

Division of IT: Axel Persaud apersaud@umd.edu
College of Engineering: Jim Zanhiser zahniser@umd.edu
UMIACS: Derek Yarnell derek@umiacs.umd.edu