Office of the Vice Provost for Research

July 31, 2015

Ms. Hillary Hess
Regulatory Policy Division
Bureau of Industry and Security
U.S. Department of Commerce
Room 2099B
14th Street and Pennsylvania Ave. NW.
Washington, DC 20230

RE: RIN 0694-AG32

Dear Ms. Hess,

The University of Pennsylvania (Penn) supports the open exchange of information in fulfillment of our mission of research, education, and service. As a result, Penn does not accept restrictions on access, publication, dissemination, or participation in research and classroom activities based on national origin.

Penn welcomes the opportunity to comment in response to the Bureau of Industry and Security (BIS) RIN 0694-AG32: Revisions to Definitions in the Export Administration Regulations. We appreciate the effort involved in harmonizing and streamlining these definitions and view most of the changes as positive. For example, the exclusion of sending, taking, or storing software secured using end-to-end encryption from export activities is welcome to the academic research community, as it will reduce faculty burden associated with international travel and the need to monitor and conduct research using main campus resources while abroad. We also appreciate the BIS confirmation in this proposed rule of our understanding of "fundamental research" at universities, and in particular the clear statement that short pre-publication review of the results of fundamental research by sponsors to ensure that publication does not compromise patent rights (§734.8(b)(1)) or to insure that the publication does not inadvertently divulge sponsor provided proprietary information ((§734.8(b)(2)) does not make the research subject to the Export Administration Regulations (EAR).

We offer the following comments and suggestions.

Changes to Educational Information

Under the current EAR (§734.3(b)(3)(iii) and §734.9), "educational information" is defined as information "released by instruction in catalog courses and associated teaching laboratories of academic institutions," and excludes such information from the

1 College Hall, Suite 118 Philadelphia, PA 19104-6303
Tel 215-898-7236 Fax 215-573-2108 http://www.upenn.edu/research

scope of the EAR. The proposed rule removes § 734.9 and this definition, and replaces it in proposed EAR §734.3(b)(3)(iii) with information and software that "concern general scientific, mathematical, or engineering principles commonly taught in schools *and* released by instruction in a catalog course or associated teaching laboratory at an academic institution" (emphasis added). We believe that this change narrows the definition of educational information excluded from the EAR, even though the comments to the proposed final rule state: "This proposed rule is not intended to change the scope of the current §734.9" [80 FR 31507, June 3, 2015]. Universities continually modify and create new and novel course content based on evolving technologies, some of which include design laboratories. Under the proposed change, it is not clear that novel course content would be considered *commonly taught* or if it might contain more than *general principles* and therefore be subject to the EAR.

At Penn, enrollment in courses is open to anyone, regardless of citizenship or national origin, who has completed any educational prerequisites. A narrow interpretation of the proposed revised EAR §734.3(b)(3)(iii) would inhibit the ability of U.S. universities to develop new courses in emerging areas of science and engineering that are critical to the future competitiveness of the industrial sector.

Penn recommends removing the phrase "concern general scientific, mathematical, or engineering principles commonly taught in schools" and that the current "released by instruction in catalog courses and associated teaching laboratories of academic institutions" be retained for proposed EAR §734.3(b)(3)(iii). Alternatively, we endorse the recommendation by the Council on Government Relations (COGR) and the Association of American Universities (AAU) to change the "and" in the proposed definition to an "or", to avoid unintentionally limiting this definition (*i.e.*, to clearly cover a new university course in an emerging technology area so long as it is included in a course catalog), and to achieve the government's stated goal as set forth in the Federal Register of not changing the scope of the current EAR §734.9.

"Fundamental research," "technology," and "software"

Currently, publicly available technology and software arising during, or resulting from, fundamental research are not subject to the EAR (§734.3(b)(3)). Under the proposed EAR §734.8(a), "technology," but not software, that arises during, or results from, fundamental research and is intended to be published, is not subject to the EAR. This is a significant change that will complicate and restrict university research. Both "software" and "technology" resulting from university research are published. Under the proposed change, a natural-language document written by a researcher could be "technology" arising during fundamental research while a computer-language document could be subject to deemed export restrictions, even though it arises during fundamental research and is intended to be published. We suggest that the language be revised to distinguish between source code, which may be published as the result of fundamental research, and other software. As an alternative, Penn also endorses and would support the recommendation in the comments from COGR and AAU on this issue.

Effective Date of the Final Rule

RIN 0694-AG32 (and the corresponding RIN 1400-AD70 to revise the ITAR regulations) could have a significant and negative impact on regulatory burden for Penn, if the final rules are adopted as published and without the changes suggested by COGR and AAU.

The proposed changes to the ITAR §120.49(b) Prepublication Review would significantly increase Penn's administrative burden, as described in our comment to DDTC (attached). If the proposed rule is adopted as written and without changes, Penn would have a very difficult time achieving compliance within 30 days after the publication date of the final rule. We suggest, at a minimum, that the effective date be six months after publication of the final rule.

Other Comments

Penn works closely with the Council on Governmental Relations (COGR), the Association of American Universities (AAU), and the Association of University Export Control Officers (AUECO) and has reviewed their comments being submitted concerning the proposed EAR and ITAR changes. Where no Penn comment is offered, we concur with the comments offered by COGR, AAU, and AUECO.

Penn appreciates the opportunity to provide comments on these proposed changes.

Sincerely,

Dawn A. Bonnell, PhD
Vice Provost for Research
Henry Robinson Towne Professor of Engineering and Applied Science
Materials Science and Engineering

Attachments

Office of the Vice Provost for Research

July 31, 2015

C. Edward Peartree
Director
Office of Defense Trade Controls Policy
U.S. Department of State
2401 E Street, N.W.
Attn.: ITAR Amendment
Washington, DC 20522

RE: ITAR Amendment – Revisions to Definitions; Data Transmission and Storage (RIN 1400-AD70)

Dear Mr. Peartree:

The University of Pennsylvania (Penn) supports the open exchange of information in fulfillment of our mission of research, education, and service. As a result, Penn does not accept restrictions on access, publication, dissemination, or participation in research and classroom activities based on national origin.

Penn welcomes the opportunity to comment in response to the Directorate of Defense Trade Controls (DDTC) RIN 1400-AD70: International Traffic in Arms; Revisions to Definitions of Defense Services, Technical Data, and Public Domain; Definition of Product of Fundamental Research; Electronic Transmission and Storage of Technical Data; and Related Definitions.

We recognize and appreciate the efforts of the Departments of Commerce, Defense, and State to reform U.S. export controls and view most of the proposed changes as positive. For example, the exclusion of sending, taking, or storing software secured using end-to-end encryption from export activities is welcome to the academic research community, as it will reduce faculty burden associated with international travel and the need to monitor and conduct research using main campus resources while abroad. RIN 1400-AD70 and the accompanying RIN 0694-AG32 regarding revisions to EAR definitions, include many positive proposed changes, advance harmonization goals, and in many areas would reduce regulatory burdens on universities.

However, as written, several proposed changes would result in significant increased and new administrative burdens in the management of industry-sponsored research at Penn.

1 College Hall, Suite 118 Philadelphia, PA 19104-6303
Tel 215-898-7236 Fax 215-573-2108 http://www.upenn.edu/research

We offer the following comments:

Fundamental Research and Prepublication Review

Penn favors defining "fundamental research" separately from the definition of "public domain". Penn also supports that the proposed ITAR regulation defines that information arising during, or resulting from, fundamental research that is intended to be published is not technical data subject to the ITAR. However, the addition of proposed ITAR §120.49(b) on prepublication review is highly problematic. Proposed ITAR §120.49(b) states that "technical data that arises during, or results from, fundamental research is intended to be published to the extent that the researchers are free to publish the technical data contained in the research without any restriction or delay, including … research sponsor proprietary information review." Penn considers this to be at odds with NSDD-189, which distinguishes fundamental research, the results of which are published and shared broadly within the scientific community, from proprietary and restricted research, the results of which are restricted for proprietary or national security reasons. We believe that NSDD-189 does not contemplate that a brief, temporary period for a commercial sponsor to conduct a "proprietary information review" should be treated as a *restriction* or *delay* on publication, and, thus, bring the research outside the definition of "fundamental research."

While Penn does not accept dissemination controls on information arising from research, industry sponsors of university fundamental research generally require pre-review of publications, simply to ensure that no proprietary material inadvertently has made its way into the research report, and to give a company a brief opportunity to decide whether the research has resulted in any patentable inventions and to move expeditiously to file a patent application. Penn generally will agree to brief, time-limited reviews, often about 30 days. This is entirely different from accepting a publication restriction in which the sponsor must give *approval* before the researcher is able to publish. The current EAR §734.8recognizes these distinctions. For example, current EAR § 734.8(b)(2) states: "Prepublication review by a sponsor of university research solely to insure that the publication would not inadvertently divulge proprietary information that the sponsor has furnished to the researchers does not change the status of the research as fundamental research"; and current EAR §734.8(b)(3) states: "Prepublication review by a sponsor of university research solely to ensure that publication would not compromise patent rights does not change the status of fundamental research, so long as the review causes no more than a temporary delay in publication of the research results." Neither case requires sponsor approval before the research is published or gives the sponsor the right to prevent the research from being published. The government has not explained why this principle, which has worked extremely well to advance university-industry research in areas governed by the EAR, should be any different in areas governed under ITAR.

In fiscal year 2015, Penn entered into more than 450 research agreements with industry sponsors. Currently, research under such agreements that include temporary and short-term publication reviews, without any affirmative approval requirement, is defined as fundamental research, regardless of whether the subject matter would otherwise fall under the ITAR or the EAR. The proposed ITAR exclusion from "fundamental research" if there is any brief pre-publication delay, will require not only hours of review of contract language, but also appropriate classification of technology and technical data prior to the start of the research activity on campus. This will result in significant delays, including increasing the time spent negotiating sponsored research agreements with commercial sponsors, obtaining commodity jurisdiction determinations in cases of classification uncertainty, implementing technology control plans, and applying for and obtaining licenses to enable participation of foreign nationals in the research, monitoring of those plans, and eventual removal of the plans once the sponsor review is complete. In our globally diverse research university community, the proposed change will result in increased regulatory burden on our faculty and support staff, increased numbers of license applications and licenses required, increased administrative expense (reducing the overall funding from the sponsor that is available to pay for direct research), and threats to our open, nondiscriminatory research environment.

Penn estimates that this requirement could result in the need for additional employees to support our export compliance infrastructure and will significantly increase administrative burden to faculty. We believe that there is no benefit to national security that accompanies this additional burden, and the publication in the Federal Register does not articulate any national security benefit outweighing these burdens, or why the ITAR approach differs from the EAR approach. Penn strongly recommends that language in proposed ITAR §120.49(b) be changed to match the language in the current EAR §734.8(b), so that the ITAR definitions of fundamental research and intent to publish conform with the university community's understanding of the concept of fundamental research based in NSDD-189.

Effective Date of the Final Rule

Given the significant increase in administrative burden outlined above, if the proposed changes are finalized as currently written, Penn would have a very difficult time achieving compliance within 30 days after the publication date of the final rule, for all of our industry sponsored research. We suggest, at a minimum, that the effective date be six months after publication of the final rule. Penn also suggests that the final rule be applicable to new sponsored research contracts first entered into after the effective date that is chosen, and not have any retroactive effect regarding research that has already commenced as of the effective date, or a funding contract already entered into prior to the effective date.

Penn is a member of the Council on Governmental Relations (COGR) and the Association of American Universities (AAU), among other organizations. We have had the opportunity to review their comments being submitted concerning the proposed

ITAR and EAR changes. We concur with the comments submitted by these organizations.

Sincerely,

Dawn A. Bonnell, PhD
Vice Provost for Research
Henry Robinson Towne Professor of Engineering and Applied Science
Materials Science and Engineering