



July 8, 2013

Office of Defense Trade Controls Policy
U.S. Department of State

RE: RINs 1400-AC80 and 1400-AD33 (ITAR Amendment – Category XV Spacecraft Systems and Related Articles and “Defense Services”)

To Whom It May Concern,

I am writing on behalf of the Association of University Export Control Officers (AUECO), a group of 28 senior export practitioners with experience at accredited institutions of higher learning in the United States (U.S.). AUECO members monitor proposed changes in laws and regulations affecting academic activities and advocate for policies and procedures that advance effective university compliance with applicable U.S. export controls and trade sanction regulations.

AUECO is specifically interested in contributing to the export reform effort in order to ensure that the resulting regulations do not have an adverse impact on academic pursuits. As a result, AUECO is providing the following comments in response to the U.S. Department of State’s (Department) request for public comments on its proposed revision of U.S. Munitions List (USML) Category XV Spacecraft Systems and Related Articles and the definition of “Defense Services”.

The development of positive lists with objective parameters to describe controlled items is important for the export community. “Bright lines” between items and technologies controlled by the International Traffic in Arms Regulations (ITAR) and by the Export Administration Regulations (EAR) will improve our ability to comply with the regulations. AUECO fully supports and appreciates the current effort to move some satellites and spacecraft from the U.S. Munitions List (USML) to the Commerce Control List (CCL); however, we recommend that the Department reconsider the appropriate jurisdiction for some of the articles proposed for retention on the USML. In addition, we are concerned by an apparent inconsistency between parts of the proposed “defense service” definition and National Security Decision Directive 189 (NSDD189) *National Policy on the Transfer of Scientific, Technical and Engineering Information*, or applicable exemptions already present in the regulations, which could negatively impact academic collaborations and scientific inquiry.

§ 121.1 Category XV Spacecraft Systems and Related Articles

AUECO appreciates the considerable effort DDTC has undertaken to more specifically describe the articles controlled under USML Category XV. However, as currently constructed the proposed rule would result in the inclusion of satellites and spacecraft supporting fundamental research on

terrestrial climate, weather, fires and other earth-based natural phenomena, as well as research on planets, exoplanets, and other space objects.

We understand that constructing a positive list is challenging, and appreciate the opportunity to provide comments. Based upon our review we suggest that the following satellites, spacecraft and components do not contain technologies unique to the United States, are not critical to national security, and are more appropriately controlled by the EAR.

- “Objects” in § 121.1(a)(2) should be defined or clarified as referring to man-made objects. If intended to include naturally-occurring phenomena such as exoplanets or weather systems it would include many research and scientific satellites.
- As written, § 121.1(a)(9) would seem to include most if not all satellites and spacecraft that use Positioning, Navigation, and Timing (PNT). We recommend that either a clearer description or specific criteria such as precision (such as those in § 121.1(e)(10)) be provided to identify the Positioning, Navigation, and Timing functions that are critical to the national security and require ITAR control.
- § 121.1(e)(1)(ii) specifies antennas that are “actively scanned.” However, we believe the intent is to control “actively electronically scanned arrays” and suggest that this clarification be made in the final rule. As written, the paragraph would include antennas that physically rotate, which are used in space and weather research satellites.
- In § 121.1(e)(6), while the optical bench assembly for items in paragraph (a) may require control under the ITAR, we suggest that beam splitters, fold mirrors, and flexure mounts are widely used components without unique U.S. technology and as such would be appropriately controlled under the EAR.
- § 121.1(e)(18) is a catch-all which fails to take into consideration the purpose or capabilities of DoD-funded secondary or hosted payloads and as such would include payloads specifically designed and built to perform research funded by DoD components whose mission includes funding basic research, e.g. DARPA or the Office of Naval Research (ONR). Treating all DoD-funded payloads as defense articles, whether or not there are national security considerations, will make it difficult for many universities to accept DoD contracts of this nature. Some universities, including many of the top research universities, do not accept research which carries restrictions on the ability to publish research results or require the exclusion of individuals on the basis of nationality or citizenship; as a result in some cases DoD will not have access to the researchers best qualified to address a particular issue or research question. We suggest that classification of research satellites or spacecraft should be based primarily on their technical capabilities and characteristics (*i.e.* do they possess parameters or characteristics that will provide an exclusive military or intelligence application?). However, should the Department determine that additional review and oversight is necessary, we recommend the approach used in Category VIII(f) (see final rule published April 16, 2013) be adopted and propose the following text for a Note to paragraph XV(e)(18): Paragraph XV(e)(18) does not control secondary or hosted payloads, and specially designed parts and components therefor that have been (a) determined to be

subject to the EAR via a commodity jurisdiction determination (see § 120.4 of this subchapter) or (b) identified in the relevant Department of Defense contract as being developed for both civil and military applications.

The following additional suggestions are offered to improve the readability and clarity of the final rule:

- In § 121.1(a)(7)(i), an “and” may have been omitted, we suggest: “...with less than 40 spectral bands **and** having an aperture greater than .35 meters.”
- We believe the intent of § 121.1(e)(7) is to control only those systems that are specially designed for a spacecraft identified in paragraph (a); therefore, we recommend the removal of the “and” proceeding “specially designed” to improve clarity. If we have mistaken the intent, we request additional clarification of what is covered by this subparagraph.

On a related topic, exemptions from licensing requirements exist for the export of some Category XV defense articles and defense services by U.S. institutions of higher learning; however, no such exemptions exist for any other USML category. We request the Department consider extending the license exemptions for “articles fabricated for fundamental research purposes otherwise controlled by Category XV(a) or (e)” and associated defense services currently found in § 123.16(b)(10) and § 125.4(d), respectively, to all articles fabricated for fundamental research purposes that would otherwise be subject to control under the ITAR.

§ 120.9 The Definition of “Defense Service”

Precise definitions and consistent use of defined terms are essential to the development of clear regulations and enable exporters to confidently interpret and apply the regulations to their own activities. The new proposed definition of “defense service” provides clarification of what is and is not a defense service when the activity relies solely on public domain information. In accordance with § 120.9(a)(1) furnishing assistance (including training) to a foreign person whether in the United States or abroad, in the design, development, engineering, manufacture, production, assembly, testing, intermediate- or depot-level, modification, demilitarization, destruction, or processing of defense articles does not constitute a defense service, so long as the activities are performed using only public domain information. AUECO views the proposed paragraph at § 120.9(a)(1) as a positive clarification ensuring that institutions of higher learning can perform educational, training and fundamental research activities consistent with NSDD 189.

In contrast, § 120.9(a)(2) , specifies that regardless of whether only public domain information is used, the furnishing of assistance to a foreign person, whether in the United States or abroad, for the “integration” (as defined in the note to paragraph (a)(2)) of any item controlled on the USML or items subject to the EAR into an end item or component that is controlled as a defense article on the USML, regardless of the origin; is a defense serviceⁱ.

The proposed broad inclusion of integration in the definition of “defense service” is particularly problematic for institutions of higher learning conducting basic and applied research that involves experimentation with hardware and software. Scientists and engineers routinely create, modify,

and hence, “integrate” components and parts using only public domain information to validate designs by means of experimentation, and to advance science and technology through the assembly and testing of prototype hardware and software.

For example, under a fundamental research effort funded by an ONR grant (*i.e.*, 6.1 funding; no publication restrictions (*i.e.*, specifies Distribution Statement A: publicly releasable); no foreign national restrictions; Contracting Officer and/or Program Officer have specifically stated the university effort is fundamental research; and the effort takes place solely at an accredited institution of higher learning in the US) the scope of the effort is to research various naturally occurring phenomena that interfere with the effective functioning of both civil and military GPS devices. Only public domain information is used in the effort. As part of the effort the research team creates a GPS device (‘Research GPS’) from various EAR (CCL and/or EAR99) components; the Research GPS will be used in the research effort. By happenstance the Research GPS produces navigation results above 60,000 feet altitude and at a velocity of 520 m/s, making it subject to control under Category XV(c)(2) as currently proposed. Although furnishing assistance using public domain information to a foreign person in the design, engineering, manufacture, assembly, etc., of the Research GPS would not be a controlled defense service under § 120.9(a)(1), it appears that providing assistance using solely public domain information to the foreign person in the integration of the various CCL and/or EAR99 components to create the Research GPS would constitute a defense service under § 120.9(a)(2). Is this an accurate application of the proposed definition? If so, it is difficult to imagine any of the activities listed in § 120.9(a)(1), other than “design” activities that do not involve hardware or software, being feasible without some degree of “integration.”

Scenarios like the one above are not uncommon in fundamental research efforts. It is our position that researchers should not be expected to make personnel and information control decisions, *i.e.* jurisdictional determinations, based on whether or not they believe an experimental device being constructed for fundamental research purposes will meet or exceed USML technical specifications; rather, the device should only be subject to control once it has been built and testing has shown that it meets or exceeds the USML technical specifications. Likewise, we do not believe that foreign national participation in the construction of experimental devices should be restricted unless the development is funded by a contract or other funding authorization that indicates the device is being developed for a specific military or intelligence use or application warranting control under the ITAR. The unintended consequence of the proposed definition will be to unnecessarily restrict fundamental research efforts by requiring licenses for integration activities even when all information is in the public domain.

Beyond the apparent conflict with NSDD 189’s policy directive that “the mechanism for control of information generated during federally-funded research in science, technology, and engineering at colleges, universities, and laboratories is classification”, the “integration” rule also appears to render the exemption from the registration requirements in paragraph § 122.1(b)(4) useless, as persons who “engage in the fabrication of articles for experimental or scientific purpose, including research and development”, will in fact be prohibited from involving foreign persons in these experimental or scientific processes (any research and development activities involving “integration” of items into a defense article) without an export license, even when all of the information relied upon is in the public domain. Any person engaging in these activities (beyond

“plug and play”) will now be required to register if they choose to involve foreign persons in “integration” activities even when all of the information is found in the public domain.

The impact of the proposed rule for persons who engage in fundamental research or participate only in the fabrication articles for experimental or scientific purpose are not trivial. Without correction or clarification, they undermine major pillars of the federal government’s social contract with higher education to not regulate fundamental research; principles assiduously supported in the past by the Department of State (e.g., 67 FR 15099 (March 29, 2002)).

§120.3 Policy on designating or determining defense articles and defense services on the U.S. Munitions List

In its final rule 78 FR 22754 (Tuesday, April 16, 2013), DDTC amended section § 120.3 Policy on designating or determining defense articles and services on the U.S. Munitions List to add the following requirement:

- (a) For purposes of this subchapter, a specific article or service may be designated a defense article (see § 120.6 of this subchapter) or defense service (see § 120.9 of this subchapter) if it:
 - (2) Provides the equivalent performance capabilities of a defense article on the U.S. Munitions List.

Although this analysis can be done for USML entries that detail the properties peculiarly responsible for achieving the controlled performance levels, characteristics or functions, it will be difficult for the numerous categories where no positive performance characteristics are provided. For example, how is an exporter to know whether or not their unarmed unmanned aerial vehicle (UAV) provides equivalent performance capabilities to an unarmed military UAV controlled under Category VIII(a)(5)? USML category entries without positive parameters will not provide clear guidance to US exporters of when a commodity or technology is controlled using solely the equivalence criteria of 120.3(a)(2). AUECO recommends that when performance parameters are provided that sufficient guidance is included in the USML and in the relevant CCL listings to ensure that this “equivalence requirement” does not lead to an overly broad interpretation of the ITAR’s jurisdiction. We also want to point out that it will be impossible for exporters to evaluate the “equivalence” of their item(s) to ones controlled solely due to the fact that they are “developmental” articles funded by the Department of Defense, e.g., Developmental aircraft controlled by Category VIII(f).

The Need for Harmonized Definitions

The definitions of terms used in the export regulations are vital to the interpretation and implementation of the export control regulations by exporters. Many of the key concepts that universities rely upon in determining the applicability of the regulations, including the proposed rules, to our activities ultimately rely on how certain terms are defined; any changes to those key definitions will substantially impact AUECO’s responses to this and other requests for public comment. AUECO is concerned that without final definitions of terms such as public domain/publicly available, fundamental research, and technology/technical data we cannot

appropriately analyze the proposed rules under consideration as part of the export reform initiative.

AUECO recommends that the proposed harmonized definitions be released prior to the release of any further proposed revisions and/or final rules to the USML. We would further ask that the export community be provided the opportunity to comment not only on the proposed definitions once released, but also on previously closed proposed regulatory changes when the proposed definition may impact the interpretation and/or implementation of the rule, whether proposed or final.

In Conclusion

AUECO thanks DDTTC for its proposed steps to remove some satellites and spacecraft from the USML; this will enable a great deal of space-related educational and research activities to be conducted at United States accredited institutions of higher learning without intersection with ITAR defense articles and defense services. However, we request that DDTTC reconsider some Category XV satellites and spacecraft proposed to remain on the USML, and to reevaluate the “defense service” definition in light of its potential negative impact on fundamental research at institutions of higher learning.

Sincerely,



Kelly Hochstetler
Chair
Association of University Export Control Officers
Email: auecogroup@gmail.com
Website: <http://aueco.org>

ⁱ In note to paragraph (a)(2): “Integration” means the systems engineering design process of uniting two or more items in order to form, coordinate, or blend into a functioning or unified whole, including introduction of software to enable proper operation of the article. This includes determining where to integrate an item (e.g., integration of a civil engine into a destroyer which requires changes or modifications to the destroyer in order for the civil engine to operate properly; not plug and play). “Integration” is distinct from “installation,” which means the act of putting something in its place and does not require changes or modifications to the item in which it is being installed (e.g., installing a dashboard radio into a military vehicle where no changes or modifications to the vehicle are required).”