



September 9, 2013

Ms. Sarah Heidema  
Acting Director  
Office of Defense Trade Controls Policy  
U.S. Department of State

RE: RIN 1400-AD25

Dear Ms. Heidema,

I am writing on behalf of the Association of University Export Control Officers (AUECO), a group of senior export practitioners at 29 accredited institutions of higher learning in the United States. 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) second request for public comments on its proposed revision of U.S. Munitions List (USML) Category XI Military Electronics and definition for "Equipment."

**Category XI(a)(7)** subjects all electronic devices, systems or equipment funded by the Department of Defense (DoD) to control as defense articles unless they have been declared subject to the Export Administration Regulations (EAR) via a formal commodity jurisdiction (CJ) or identified in the relevant contract as being developed for both civil and military applications, when such items are not defense articles enumerated on the USML. Academic research funded by the DoD is often in newly emerging technologies that appear neither on the USML nor the CCL, necessitating frequent CJ requests from the academic community.

The limited options set forth by this proposed rule — determination in the contract, CJ, or International Traffic in Arms Regulations (ITAR) jurisdiction based solely on DoD funding — will be an obstacle to contracting, as DoD contracts are generally of relatively short duration (1 year cycles or less) and the time to obtain a CJ ruling is on the order of two months. This would be particularly limiting for academic institutions where research activities are generally performed in open environments which may include high levels of foreign national participation.

AUECO believes that **Category XI(a)(7)** will negatively impact the ability of U.S. academic

institutions to conduct “fundamental research” funded by the DoD and may negatively impact the DoD’s ability to fund “fundamental research” activities. There has long been recognition that basic and applied research in science and engineering at universities is critical to both U.S. national security and to securing economic competitiveness. In recognition of this role, both the ITAR and the EAR permit free sharing of information resulting from such “fundamental research,” 22 CFR §120.11(a)(8), or “fundamental university based research,” 15 C.F.R. §734.8(b). These carve-outs already include limitations that fundamental research would not apply if the university were to accept restrictions on the publication of the research results or on who might participate in the research activities. The proposed **Category XI(a)(7)** shifts the burden of determining whether fundamental research is applicable entirely to the DoD. We suggest that an additional note might be added to **Category XI(a)(7)** that (a)(7) does not apply to Fundamental Research under contract, grant or other funding authorization as defined in the DoD Memoranda of June 26, 2008 (John Young) and May 24<sup>th</sup>, 2010 (Ashton Carter).

AUECO previously noted<sup>1</sup> that the proposed Cat. XI creates confusion about what will be regulated as an item/technology under the EAR and what will be controlled by the ITAR. While we believe that the April 16, 2013 definition of “specially designed” is helpful, there is still potential for confusion and overlap in jurisdiction. In some instances, the proposed rule appears to assign ITAR jurisdiction over items that have been under EAR jurisdiction for decades. In the university environment, unique items are created for research purposes that will never be commercially manufactured, so providing specific make and model numbers is not feasible. As a result, we direct DDTC’s attention to several provisions that appear to either expand ITAR jurisdiction and/or cause confusion about regulatory jurisdiction.

- **Category XI(a)(1)(ii)** appears to include commodities currently controlled on the CCL, namely 6A001.a.2.a-c (hydrophones, hydrophone arrays, and related processing equipment), related software in 6D003, and the commodities currently described in ECCN 6A991.
- **Category XI(a)(1)(iii)** is devoid of technical parameters that might be used to determine what articles are intended to be controlled; however, the note to the paragraph excludes commodities described in ECCN of Category XI(a)(1)(iii), which does include technical parameters. Items falling outside 5A001.b.1 are currently EAR99. The proposed rule and clarifying note leave open the possibility that EAR99 items, which would not be excluded from Category XI(a)(1)(iii) as 5A001.b.1, would become controlled by the ITAR. We suggest that DDTC clarify how the note to XI(a)(1)(iii) is to be used by exporters in determining what is subject to the control on the USML to avoid the inclusion of items that are currently or should be EAR99.
- **Category XI(a)(3)** includes systems that have historically been found on the CCL. Synthetic Aperture Radar (SAR), Inverse Synthetic Aperture Radar (ISAR), and radar systems with electronically steerable phased array antennae all appear on the CCL in ECCN 6A008 — and the latter has been on the CCL at least since 1981: *“Phased array antennae and sub-assemblies, designed to permit electronic control of beam shaping and pointing, and/or specialized parts*

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<sup>1</sup> January 28, 2013 comments to DDTC

thereof (including but not limited to duplexers, phase shifters, and associated high speed diode switches. . .”. In the 1992 CCL update, entries for SAR, ISAR and radar systems incorporating electronically steerable phased array antennae were placed in 6A08 (the predecessor to today’s 6A008). These items remain on the CCL today, so it is puzzling and concerning that DDTC is now proposing to control these radars as “defense articles”.

- **Category XI(a)(4)(i) Electronic support systems and equipment** appears to control detection and interception systems and equipment that have historically been found on the CCL in ECCNs 5A001.i and 5A980, and may also include emerging technologies with clear commercial applications, such as commercial cognitive radios controlling E911 emergency caller location systems that need to be able to geolocate cellular signals and other location specific services. Cognitive radio, especially when using spectrum sharing technologies, may need to rely on signal detection and classification techniques, to determine the existence of military radar signals and give priority access to the military. Unless clarified, this category may unintentionally subject a number of existing or emerging commercial wireless technologies to control under the ITAR.
- **Category XI(a)(4)(iii)** appears to include commodities currently controlled on the CCL, including 5A001.f.
- **Category XI(b)(1)**, like those proposed in (a)(4)(i), appear to result in the control of items found on the CCL in ECCN 5A001.i and 5A980.
- **Category XI(c)(9)(i)** appears to overlap existing commercial items including those in 5A001.f.
- **Category XI(c)(9)(ii)** applies specific performance parameters to control antennas and “specially designed” parts and components, which AUECO appreciates, but the specific standards could include items covered by the new CCL controls for commercial satellite systems, such as those common to antennae used in LTE commercial satellite communications..
- **Category XI(c)(16)** could easily be interpreted to include parts that are common to commercial security systems. A clearly established definition of what constitutes “military” electronics is needed, since many developments in electronics result from fundamental research or civil commercial development and are later adopted by the military; these should not then become “military” electronics simply due to their adoption by the military.

AUECO notes that a number of the proposed Cat. XI entries have common non-military applications. We are able to provide a large number of examples, but for the sake of brevity list only a few here.

- **Category XI(a)(1)(ii)** appears to cover CCL-listed items that are used by biologists and commercial vessels to locate and identify marine mammals.

- **Category XI(a)(3)** appears to cover items already controlled by Category 6 of the CCL that are used for a wide variety of applications, as noted below:
  - SAR used for earth science applications: <http://www.nrcan.gc.ca/earth-sciences/geography-boundary/remote-sensing/radar-remote/2122>
  - SAR used to monitor and detect forest fires: See int. j. remote sensing, 2002, vol. 23, no. 20, 4211–4234
  - SAR used for crop classification: <http://www.intechopen.com/books/references/advances-in-geoscience-and-remote-sensing/application-of-multi-frequency-synthetic-aperture-radar-sar-in-crop-classification>
  - SAR used for flood monitoring and alarm systems, environmental monitoring, and agricultural applications: [http://www.nec.com/en/global/solutions/space/remote\\_sensing/index.html](http://www.nec.com/en/global/solutions/space/remote_sensing/index.html)
  - SAR for oil spill detection, ship detection, sea ice monitoring, climate change, flood damage assessment, cartography, agriculture and forestry: [http://www.pcigeomatics.com/pdfs/radar\\_focus\\_on.pdf](http://www.pcigeomatics.com/pdfs/radar_focus_on.pdf)
  
- **Category XI(a)(4)(iii)** appears to include commodities controlled on the CCL. For example, Long Term Evolution (LTE), marketed as 4G LTE advanced communications, a standard for wireless communication of high-speed data for mobile phones and data terminals is currently very susceptible to jamming. The proposed rule needs to be modified to ensure that features used in commercial 4G cellular LTE systems and equipment are not considered “electronic combat equipment.” Category XI(c)(9)(i) appears to overlap with these same LTE commercial items. 4G LTE uses electronically steered angular beams and nulls that, based on the limited descriptors provided, would potentially fit the control criteria of Category XI(c)(9)(i).
  
- **Category XI(b)** appears to control existing law enforcement and emergency responder systems. Both E911 emergency response systems and security methods used by companies to determine network intrusions use the techniques identified in Category XI(b)(1).

The export control reform initiative aims to “Describ[e] items using objective criteria...rather than broad, open-ended, subjective, catch-all, or design intent-based criteria,” creating a positive list that exporters can use to confidently determine the categorization of their items on the USML and the CCL. As noted above, the creation of these positive lists should not result in expansion of the ITAR such that previously CCL-listed items and technologies become ITAR-controlled.

The following subparagraphs are examples where the inclusion of technical specifications or performance parameters would improve the clarity of the description of controlled items and facilitate self-classifications by exporters:

- **Category XI(a)(1)(ii)** identifies “Underwater single acoustic sensor systems that distinguish tonals and locates the origin of the sound” without providing technical parameters to establish a reasonable threshold to warrant their inclusion on the USML. AUECO suggests that if there are no clear technical parameters or performance thresholds that differentiate between systems intended to be included on the USML, perhaps the unique characteristics of military “tonals” should be subject to control rather than the sensing technology.
- **Category XI(a)(3)** uses the term “target” throughout subparagraph (3) as a trigger for ITAR jurisdiction, without defining the term, resulting in vague controls that could sweep in a wide range of radar systems appropriate for USML control. AUECO would point out that “target” is used when discussing how radar systems send and receive signals to identify any unknown item, including non-military items such as flocks of birds, hailstones rain, etc., and recommends a definition or explanation recognizing non-military use.

The phrase “radar that sends and receives communications” could encompass ALL radar systems that transmit and receive data including those controlled by ECCN 6A008 or even 6A998, since all radars send and receive some type of information. AUECO recommends that DDTC clarify this provision so that it does not sweep radars currently on the CCL into ITAR controls.

- **Category XI(a)(4)** simply states “Electronic combat equipment,” without specific features or performance parameters making the enumerated items “combat” equipment. For example, neither subparagraph (i) nor (iii) includes language which differentiates between military and non-military systems and equipment. In contrast, subparagraph (ii) contains delimiters that are more clearly related to “combat,” as that term is commonly used. Absent clarification from DDTC “electronic combat equipment” seems far too open to differences in interpretation and application and likely to sweep in items currently on the CCL.

Many proposed Category XI entries rely heavily on the category descriptor of “military” electronics to determine what items are included in the Category, not upon the current regulations in which defense items are “designed, developed... for a military application.” Each area of overlap identified above, and others we may have failed to identify, will create significant uncertainty for exporters in determining the regulatory jurisdiction of their items. This uncertainty could lead to an increase in the number of commodity jurisdiction requests and inadvertent violations.

AUECO suggests additional technical review and discussion to identify such potential overlaps and add appropriate clarifying language, such as technical parameters and/or notes like the one to Category XI(a)(1)(iii) which excludes 5A001.b.1 items before a final rule is issued, to prevent items and technologies currently on the CCL from being swept into the expansion of Category XI.

We thank DDTC for the opportunity to provide this comment.

Sincerely,

A handwritten signature in cursive script that reads "Elizabeth Peloso".

Elizabeth Peloso

Chair

Association of University Export Control Officers

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