AUECO
ASSOCIATION OF UNIVERSITY EXPORT CONTROL OFFICERS

January 27, 2013

Bureau of Industry and Security
U.S. Department of Commerce

RE: RIN 0694-AF64 (Revisions to the Export Administration Regulations (EAR): Control of Military Electronic Equipment and Related Items the President No Longer Warrant Control Under the United States Munitions List (USML))

To Whom It May Concern,

I am writing on behalf of the Association of University Export Control Officers (AUECO), a group of senior export practitioners at twenty-six 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 unintended adverse impact on academic pursuits. As a result, AUECO is providing the following comments in response to the U.S. Department of Commerce's (Department) request for public comments on its proposed revisions to the EAR.

Two principal goals of the export control reform initiative are the establishment of a "bright line" between the USML[1] and the Commerce Control List[2] (CCL) and the development of "positive lists" through the use of objective parameters to describe controlled items. These goals are essential so that the export community can confidently make self-determinations regarding jurisdiction, EAR or International Traffic in Arms Regulations[3] (ITAR), and self-classifications, identification of the appropriate Export Control Classification Number (ECCN) or USML category. While AUECO appreciates the current effort, the coincident release of this proposed rule with the Department of State's proposed revisions to Category XI[4], we feel that parts of the proposed rules fail to achieve these objectives and will result in either increased ambiguity or leave the academic export community without guidance.

AUECO has identified several instances where the proposed revisions to Category XI appear to overlap with existing ECCNs. Examples of these areas of overlap have been identified in our public comments to the Department of State, attached for your reference. We are concerned that the changes, if adopted as proposed, will in some cases result in the move of items currently controlled on the CCL to the USML and in other cases will create significant ambiguity for exporters regarding the jurisdiction and classification of existing items as well as items under development.

[1] 22 CFR 121
[2] 15 CFR 774, Supplement No. 1
[3] 22 CFR 120 - 130
[4] 77 FR 70958-70964 (November 28, 2012)

Precise definitions and consistent use of defined terms are essential to the development of a "bright line" and "positive lists" and are critical if exporters are to confidently interpret and apply the regulations to their own items and activities. Many of the potential overlaps between the CCL and USML identified in our public comments to the Department of State are due to the use of terms that are either undefined or not clearly defined and, at least in some cases, act as "catch-alls" that seem likely to capture items currently controlled on the CCL and move them to the USML. Similarly, the harmonized definitions anticipated as part of the export control reform initiative are vital to the interpretation of the proposed regulation and 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. These definitions are absolutely critical to the interpretation and implementation of the proposed revisions to the EAR and to our assessment of their impact on university research and educational activities.

In addition to the more general issues that AUECO has identified above and in our public comments to the Department of State, we offer the following specific comments on the proposed changes to the EAR:

<u>ECCN 3A611</u>

AUECO recommends that the Department remove the phrase "other than ECCN 3A611" from the third sentence of the "Related Controls" paragraph and add "another" after "or" and in front of ""600 series" ECCN". The "Related Controls" paragraph appears in ECCN 3A611, and therefore the above listed phrase is not required.

AUECP notes that proposed paragraph 3A611.a does not include a positive list of items specially designed for military use, which is one of the primary justifications of the export control reform initiative. Rather, the proposed language simply transfers the vagueness of the current USML language to the CCL.

Proposed paragraph 3A611.e duplicates equipment proposed to be classified under proposed Category XI(a)(2)(v) and (vi). We urge the Departments of State and Commerce to specify exactly which equipment is controlled by the respective control lists either by name or by discreet technical parameters.

In proposed 3A611.f, the Department of Commerce appears to delegate responsibility for product classification to a third party, the Defense Microelectronics Activity (DMEA). Since jurisdictional responsibility resides with the Department of State, it is not clear that BIS has authority to make this delegation.

Commerce notes that the purpose of 3A611.x is to control electronic parts, components, accessories, and attachments that are not enumerated on the USML or that appear in other 600 series controls. However, it is not clear that there are any such parts, components, accessories and attachments. Indeed, as Commerce notes, electronics are often found in other end-items, and as such would be

controlled under the corresponding ECCN for the end-item. It is our position that the proposed language is not required and needlessly complicates the CCL.

ECCN 3E611

AUECO finds the language proposed in paragraph 3E611.a to be duplicative and suggests that either of the following phrases should be removed to improve clarity:

- "(other than that described in 3E611.b or 3E611.y)"
- "not otherwise enumerated in this ECCN"

ECCN 5A001

Paragraphs 5A001.f and .h duplicate items found in proposed USML Category XI(a)(4)(iii). We recommend that the Department resolve this apparent overlap prior to releasing a final rule on this matter.

AUECO's position is that changes proposed to Category XI(b) by the Department of State in RIN 1400-AD25 complicate the classification of equipment currently classified in 5A001.i and 5A980. Rather than the proposed language, we suggest that the Departments of State and Commerce revise both the USML and CCL to create jurisdictional "bright lines" and "positive lists" of the specific equipment to be controlled in each Category/ECCN as intended by the export control reform initiative.

ECCN 7A006

The "Reason for Control" table in ECCN 7A006 indicates that MT controls apply to commodities that meet or exceed the parameters of 7A106. It appears that, by definition, all items in 7A006 meet or exceed the parameters of 7A106, therefore AUECO recommends that this language be removed.

In Conclusion

AUECO recommends that harmonized definitions be released prior the any additional paired Federal Register notices from the Departments of State and Commerce, revising USML categories and revising or creating ECCNs to accept items that no longer warrant control on the USML, respectively. 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.

AUECO fully supports the Department's efforts to convert the USML into a "positive list" and to move items that no longer warrant the more stringent controls of the ITAR to the CCL, and hopes that this step will reduce jurisdictional disputes and uncertainty. We encourage the Department to revisit the proposed rules amending the EAR as a single regulation prior to implementation of any changes. It is important that the proposed definitions, both those that have been released for public comment and the anticipated harmonized definitions, and revised regulations work in concert to protect U.S. national security without unnecessarily impeding fundamental research activities critical to maintaining the U.S.

defense industrial base. AUECO thanks the Department for the opportunity to comment on the proposed changes to the EAR.

Sincerely,

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

January 27, 2013

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

RE: RIN 1400-AD25 (ITAR Amendment – Category XI and "Equipment")

To Whom It May Concern,

I am writing on behalf of the Association of University Export Control Officers (AUECO), a group of senior export practitioners at twenty-six 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) request for public comments on its proposed revision of U.S. Munitions List (USML) Category XI Military Electronics and definition for "Equipment."

While AUECO appreciates the current effort, we feel that parts of the proposed rule fail to achieve these objectives and result in either increased ambiguity or leave the academic export community without guidance. Our comments are organized as follows:

- Jurisdictional Clarity – Failure to Create a "Bright Line";
- Unambiguous Descriptions – Absence of Performance Parameters;
- Fundamental Research Concerns – Commodity Jurisdiction Cycles, Proof-of Concept Activity and Other University Specific Issues;
- An Imprecise Definition of "Equipment"; and
- The Need for Harmonized Definitions.

<u>Jurisdictional Clarity – Failure to Create a "Bright Line"</u>

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.

The establishment of a "bright line" between the USML and the Commerce Control List[1] (CCL) was an initial objective[2] of the export control reform initiative and is clearly reaffirmed in the current notice. AUECO has reviewed the proposed revisions to Category XI and identified several instances where the intended bright line between items on the USML and CCL is in fact blurred and appears to be an expansion of regulatory scope.

AUECO has identified Export Control Classification Numbers (ECCNs) have been provided for each some areas of potential overlap. However due to limited resources and time constraints we are not confident that we have identified all such occurrences; therefore, the following should only be considered as illustrative examples. Unfortunately, a comprehensive review to identify all possible areas of overlap was not possible given our limited time and resources.

Category XI(a) Electronic equipment not included in Category XII of the U.S. Munitions List, as follows

Category XI(a)(1)(ii) appears to include commodities currently controlled on the CCL in ECCN 6A001.a.2.a-c (hydrophones, hydrophone arrays, and related processing equipment) which are used by biologists and commercial vessels to locate and identify marine mammals, among other non-military uses. Software related to ECCN 6A001 commodities is located in ECCN 6D003. Proposed Category XI(a)(1)(ii) also appears to overlap with the commodities currently described in ECCN 6A991 Marine or terrestrial acoustic equipment, n.e.s., capable of detecting or locating underwater objects or features or positioning surface vessels or underwater vehicles; and specially designed components, n.e.s.

Category XI(a)(1)(iii) is a general description 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 5A001.b.1 which does include technical parameters. Unfortunately when taken together the proposed text of Category XI(a)(1)(iii), the clarifying note, and the inclusion criteria for ECCN 5A001.b.1 can create an interpretation that items falling outside the described technical parameters of ECCN 5A001.b.1 are controlled under the ITAR, even if they might previously have been treated as EAR99 (i.e. failed to meet the technical specifications in ECCN 5A001.b.1). 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 EAR99.

The controls on radar systems and equipment proposed in Category XI(a)(3) appear to include systems that have historically been found on the CCL. For example, controls on Synthetic Aperture Radar (SAR) and Inverse Synthetic Aperture Radar (ISAR) have been found on the CCL since at least 1996[3]. The phrase "radar that sends and receives communications" could conceivably encompass ALL radar systems that transmit and receive data including those controlled by ECCN 6A008 which does not seem consistent with the stated intent of the export control reform initiative to prevent movement of CCL controlled items to the USML.

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. For example, ECCN 5A001.i controls systems or equipment, specially designed or modified to intercept and process the air interface of 'mobile telecommunications', and specially designed components. Similarly, controls on

[1] 15 CFR 774, Supplement No. 1
[2] 75 FR 76935 (December 10, 2010)
[3] See 6A008.d

systems and equipment primarily useful for the surreptitious interception of wire, oral, or electronic communications are currently found on the CCL in ECCN 5A980. An emerging technology that would be affected by inclusion of these systems and equipment on the munitions list includes commercial cognitive radios having the features specified in Category XI(a)(4)(i) that control E911 emergency caller location systems that need to be able to geolocate cellular signals. Furthermore, there is an emerging technology area to provide location specific services that may also rely on geolocation of wireless devices. Finally, the emerging area of cognitive radio, especially for spectrum sharing technologies[4], may need to rely on signal detection and classification techniques, especially to determine the existence of military radar signals, so that commercial wireless systems can recognize their existence 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.

As proposed, the descriptive characteristics of Category XI(a)(4)(iii) appear to result in the inclusion of commercial items currently subject to 5A001.f "Jamming equipment specially designed or modified to intentionally and selectively interfere with, deny, inhibit, degrade or seduce mobile telecommunication services and perform any of the following, and specially designed components therefor." Long Term Evolution (LTE), marketed as 4G LTE advanced communications, which is a standard for wireless communication of high-speed data for mobile phones and data terminals is currently very susceptible to jamming.[5] Fixing this vulnerability may require systems and equipment with capabilities enumerated in Category XI(a)(4)(iii). The proposed rule needs to be modified to ensure that these features used in commercial 4G cellular LTE systems and equipment are not considered "electronic combat equipment."

The areas of overlap identified between Category XI(a) and various ECCNs raise the question of under what circumstances items having similar or the same characteristics as those enumerated in (a)(4)(i) will be considered defense articles, and when they are considered subject to the EAR. Are the items under these ECCNs excluded from the USML if they are not used in "electronic combat equipment"? Or do they now become controlled under (a)(4)(i) because they have the "positive" characteristics enumerated for "electronic support (ES) systems) and equipment"?

It is unclear what is meant by the terms "test set" as used in proposed Category XI(a)(11). AUECO recommends that that additional description be provided to clearly specify what this paragraph is intended to control.

Category XI(b) Electronic systems or equipment "specially designed" for the collection, surveillance, monitoring, or exploitation of the electromagnetic spectrum (regardless of transmission medium), for intelligence or security purposes or for counteracting such activities. This includes:

The revisions to Category XI(b)(1), like those proposed in (a)(4)(i), appear to result in the control of collection, surveillance, and monitoring systems or equipment found on the CCL in ECCN 5A001.i, as well as systems and equipment primarily useful for the surreptitious interception of wire, oral, or electronic communications enumerated in ECCN 5A980. These ECCNs control existing law enforcement and emergency responder systems but those systems may be inadvertently included in Category XI, if the proposed revisions are adopted. Both E911 emergency response systems and security methods used by corporations to determine hacking into a network use the techniques identified in Category XI(b)(1).

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[4] FCC Notice of Proposed Rule Making http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-12-148A1.doc
[5] See http://www.technologyreview.com/news/507381/one-simple-trick-could-disable-a-citys-4g-phone-network/

Category XI(c) Parts, components, accessories, and associated equipment, as follows

Category XI(c)(9)(i) also appears to overlap existing commercial items. For example, 4G LTE (discussed above) uses electronically steer 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(c)(9)(ii) is intended to control antennas and "specially designed" parts and components that form adaptive null attenuation greater than 35 dB with a convergence time of less than 1 second. While AUECO appreciates this use of performance parameters to define the scope of the subparagraph, the specific standards would appear to include those common to antennae that may be used in LTE commercial satellite communications.

The term "multiple or more" in the proposed wording of Category XI(c)(10)(ii) seems unnecessarily redundant.

General Comments

Many of the entries in Category XI appear to rely heavily on the category descriptor of "military" electronics to determine what items are included in the Category. Without additional clarification about what specific technical parameters or performance features make the enumerated items "military" the proposed revision does not appear to improve upon the current regulations in which items are controlled if they were "designed, developed… for a military application[6]." For example, Category XI(c)(16) could easily be interpreted to include parts that are common to commercial security systems without a clearly established definition of what constitutes "military" electronics. This is particularly problematic since many developments in electronics result from fundamental research or as a result of commercial development for the civilian market and are later adopted by the military; it is not clear from the proposed rule whether or not these items become "military" electronics simply due to their adoption by the military.

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 be conducted to ensure all such potential overlaps are identified and that appropriate clarifying language is added, e.g. inclusion of more technical parameters and/or use of notes like the one to Category XI(a)(1)(iii) which excludes items subject to 5A001.b.1, before a final rule is issued for Category XI.

<u>Unambiguous Descriptions - Absence of Performance Parameters</u>

In addition to providing a jurisdictional bright line between the USML and CCL, the export control reform initiative aims to "Describ[e] items using objective criteria, such as qualities to be measured (e.g., accuracy, speed, and wavelength), units of measure (e.g., hertz, horsepower, and microns), or other precise descriptions, rather than broad, open-ended, subjective, catch-all, or design intent-based criteria[7]." The use of such parameters is critical to creating a positive list that exporters can use to confidently determine the categorization of their items on the USML and the CCL. AUECO is of the

[6] 22 CFR 120.3 Policy on designating and determining defense articles and services.
[7] See http://export.gov/ecr/eg_main_027617.asp.

opinion that while adequate technical parameters are provided for some subparagraphs in the proposed revisions to Category XI, they are significantly lacking in others. 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 versus the CCL, perhaps it is the unique characteristics of military "tonals" that should be subject to control rather than the sensing technology.

The proposed controls on radar systems and equipment in Category XI(a)(3) lack key definitions that are necessary for interpretation and application. It is noteworthy that the term "target" is used throughout subparagraph (3) as a trigger for ITAR jurisdiction (for example, (i) airborne radar that track targets and (xxi) radar employing non-cooperative target recognition). However, without the ability to understand what a "target" is, these proposed controls are vague and could sweep in a wide range of radar systems that are not appropriate for USML control. It may be helpful to understand that the term "target" is used in essentially all contexts when discussing how radar systems send and receive signals to identify an unknown item or feature (i.e. a "target"). The term "target" in these contexts can be used to describe a wide variety of items, none of which are military specific. In order to avoid an overly broad jurisdictional trigger, AUECO strongly recommends that DDTC define the term "target," or alternatively to explain in the notes to paragraph (a)(3) that non-military targets such as weather events, wildlife, environmental items are not included in that term.

Category XI(a)(4) simply states "Electronic combat equipment." AUECO is not clear what specific features or performance parameters make the enumerated items "combat" equipment when, as we pointed out in the preceding section there appears to be overlap with commodities currently on the CCL. For example, neither subparagraph (i) nor (iii) include 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.

<u>Fundamental Research Concerns – Commodity Jurisdiction Cycles, Proof-of Concept Activity and Other University Specific Issues</u>

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 EAR via a formal commodity jurisdiction 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. Much academic research funded by the DoD is in newly emerging technologies that appear on neither the USML nor the CCL, and the proposed wording would most likely necessitate frequent commodity jurisdiction requests from the academic community.

The requirement of a formal commodity jurisdiction as a prerequisite for EAR applicability unless there has been a formal contractual determination of both military and civilian applications appears to limit an

exporter's ability to self-classify an item, which is recognized by the Department of Commerce as an important and viable avenue for determining regulatory jurisdiction, so much so that guidance for making a self-classification has been placed online[8]. Additionally, the limited options set forth by this proposed rule (either the contract states that civil and military applications are involved, or a CJ must be submitted, otherwise DoD funding in and of itself triggers the ITAR) may be an obstacle to contracting, as DoD contracts are generally of relatively short duration (1 year cycles) and the time to obtain a commodity jurisdiction 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.

We are particularly concerned that Category XI(a)(7) will negatively impact the ability of U.S. academic institutions to conduct "fundamental research[9]" funded by the DoD. 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 have carve-outs to 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). Both of these carve-outs 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. Generally, academic research administrators and export compliance staff review a DoD award for the presence of such restrictions as the first consideration of whether fundamental research might apply. It is unclear how the application of fundamental research fits into the proposed rule; is the academic community to first make the fundamental research determination, and apply Category XI(a)(7) only if fundamental research does not apply, or is the assumption that DoD funded awards will not be eligible for fundamental research? In an environment where DoD funded research may entail early proof of concept activities, there may be no proposed applications, either civilian or military, as commonly occurs in early phase funding to universities. The current wording of Category XI(a)(7) does not make allowance for DoD-funded developmental, proof of concept research activities.

Finally, without information as to how DoD will make the commercial and military application determinations, it is difficult to fully assess the impact of the proposed rule on university research. Will contracting officers make such determinations, will DoD have a technical advisory group that makes such determinations, or is some other system contemplated? AUECO requests that the Department of State assure that reasonable procedures are in place before transferring jurisdictional responsibility to DoD.

<u>An Imprecise Definition of "Equipment"</u>

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. While the proposed definition of "Equipment" appears relatively straightforward on its own, it becomes less so when considered in the context of the other terms defined in §121.8. There does not appear to be a clear distinction between "Equipment" and "Component." Also, will "Equipment" be added to the lists of constituents that may comprise an "End Item" or "System"? It also seems possible, based on the existing and proposed definitions, for an item to be both "Equipment" and an "End Item."

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[8] See http://beta-www.bis.doc.gov/index.php/licensing/commerce-control-list-classification

[9] National Security Decision Directive 189

AUECO suggests that the Department consider all of the terms defined in §121.8 as a unit and prevent overlap, or to the extent that overlap is intended or unavoidable to acknowledge it within the definitions.

The Need for Harmonized Definitions

The forthcoming harmonized definitions under the export control reform initiative are vital to the interpretation of the proposed regulation and 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. These are critical to the interpretation and implementation of the proposed rewrites of the USML categories and to our assessment of their impact on university research and educational activities.

AUECO recommends that the proposed harmonized definitions be released prior the proposed revisions of additional USML categories. 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 fully supports the Department's efforts to convert the USML into a "positive list", and hopes that this step will reduce jurisdictional disputes and uncertainty. We encourage the Department to revisit the proposed rules amending the ITAR as a single regulation prior to implementation of any changes. It is important that the proposed definitions and revised USML categories work in concert to protect U.S. national security without unnecessarily impeding fundamental research activities critical to maintaining the U.S. defense industrial base. AUECO thanks the Department for the opportunity to comment on the proposed changes to Category XI and the definition of "Equipment".

Sincerely,

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