

June 1, 2012

To: DDTCResponseTeam@state.gov
Publiccomments@bis.doc.gov

Subject: ITAR Amendment - Category XIII RIN 1400-AD13 and
EAR Revision - Miscellaneous Items RIN 0694-AF51

What follows responds to the May 18 State proposed rule requests that the public identify:

- (1) any potential lack of coverage in the May 18 State and Commerce rules compared with Wassenaar Munitions List (WML) Item 17; and
- (2) specific examples of materials and miscellaneous articles whose jurisdiction would be in doubt based on this revision (this includes double coverage).

What follows also identifies:

- (3) proposed coverage not now included in the WML or the MTCR Annex.

Proposed U.S. omission of WML17 coverage should not be put into effect without Wassenaar concurrence. Proposed U.S. unilateral coverage would be more effective if included on the WML. It is recommended that the United States seek Wassenaar agreement along the lines of the proposed rules before putting them into effect in U.S. regulations.

- (1) The two proposed rules would omit the following WML 17 coverage :

17.a Self-contained diving and underwater swimming apparatus

- 3 Articles designed exclusively for military use with self-contained diving and underwater swimming apparatus.

Current USML XIII.c includes WML 17.a.3; but the May 18 proposed rule would reserve XIII.c and ECCN 8A620.f, as proposed on December 23, 2011, omits WML 17.a.3.

17.c Fittings for signature suppression

17.d Field engineer equipment specially designed for use in a combat zone

17.e “Robots”, “robot” controllers and “robot” “end-effectors”, having any of the following characteristics:

1. Specially designed for military use;
2. Incorporating means of protecting hydraulic lines against externally induced punctures caused by ballistic fragments (e.g., incorporating self-sealing lines) and designed to use hydraulic fluids with flash points higher than 839K (566°C); or
3. Specially designed or rated for operating in an electro-magnetic pulse (EMP) environment

To the extent not controlled by USML Category VII, ECCN 0A606, or ECCN 2B007

- 17.g Nuclear power generating equipment or propulsion equipment, including “nuclear reactors”, specially designed for military use and components therefor specially designed or ‘modified’ for military use.
Technical Note: For the purpose of ML17, ‘modified’ means any structural, electrical mechanical, or other change that provides a non-military item with military capabilities equivalent to an item which is specially designed for military use.
To the extent not controlled by NRC, USML Categories VI.e or XX.b , or ECCN 2A290. Proposed 0A617 Related Controls (6) also refers to USML Categories XIII and XV; but nothing relevant was found in those Categories.
- 17.h Equipment and material, coated or treated for signature suppression, specially designed for military use, other than those specified elsewhere in the Munitions List
WML 17.h is in addition to WML 17.c, which would be covered by 0C617.a.
- 17.i Simulators specially designed for military “nuclear reactors”
Proposed 0A617 Related Controls (6) states that USML Category IX.b controls WML 17.i. However, IX.b reads: “Simulation devices for the items covered by this subchapter” and NRC, not ITAR, covers nuclear reactors. On the other hand, ECCN 2A291.b, which reads “Simulators specially designed for “nuclear reactors,” appears to cover WML 17.i.
- 17.j Mobile repair shops specially designed or ‘modified’ to service military equipment.
Technical Note: For the purpose of ML17, ‘modified’ means any structural, electrical mechanical, or other change that provides a non-military item with military capabilities equivalent to an item which is specially designed for military use.
- 17.o Laser protection equipment (e.g., eye and sensor protection) specially designed for military use
to the extent not controlled by USML Category X(a)(7) or proposed XIII.j.1.
- 17.p “Fuel cells”, other than those specified elsewhere in the Munitions List, specially designed or ‘modified’ for military use
Technical Note: For the purpose of ML17, ‘modified’ means any structural, electrical mechanical, or other change that provides a non-military item with military capabilities equivalent to an item which is specially designed for military use.
to the extent not controlled unilaterally by the USML. In this connection, proposed 0A617 Related Controls (9) refers to “a defense article not on the USML”; whereas 120.6 defines “defense article” as an item or technical data designated in 121.1, which is the USML. The reference in proposed 0A617 Related Controls (10) to “USML Category XV and ECCN 9A515 controls on fuel cells specially designed for satellite or spacecraft” cannot now be evaluated by the public. Existing Category XV does not mention fuel cells and there is as yet no proposed ECCN 9A515 available for public review.

(2) Examples of doubtful jurisdiction

XIII.b Information security/information assurance systems and equipment, cryptographic devices, software, and components “specially designed” for military applications (e.g., command, control, and communications C³), and government intelligence applications) as follows:

The meanings of “information assurance,” “specially designed,” “military,” “command, control, and communications,” and “government intelligence applications” are unclear, leaving in doubt the jurisdictional difference from CCL Category 5 Part 2 Information Security.

XIIIb1 Military cryptographic (including key management) systems, equipment assemblies, modules, integrated circuits, components, and software (e.g., cryptographic interfaces) capable of maintaining secrecy or confidentiality of information or information systems, including equipment and software for tracking, telemetry, and control (TT&C) encryption and decryption.

The lack of any technical limits in XIII.b.1, leaves the unclear interpretation of “military” as the only jurisdictional discriminator. “Key management” has been abandoned in the EAR as not being a helpful discriminator. The vague term “capable of” is not used in 5A002.

XIIIb2 Military cryptographic (including key management) systems, equipment, assemblies, modules, integrated circuits, components, and software (e.g., cryptographic interfaces) capable of generating spreading or hopping codes for spread spectrum systems or equipment.

Spread spectrum and frequency hopping is explicitly covered in ECCNs 5A001.b.3 for radio equipment, 5E001.b.4 for development technology, and 5A002.a.5 (and related 5B002, 5D002 and 5E002) for information security.

XIIIb3 Military cryptanalytic systems, equipment, assemblies, modules, integrated circuits, components and software.

Cryptanalytic is covered in 5A002.a.2 (and related 5B002, 5D002 and 5E002) and 5A992.b.

XIIIb4 Military systems, equipment, assemblies, modules, integrated circuits, components, and software that provide certified or certifiable multi-level security, user isolation, or control of the exchange of or access to information between or among systems operating at different classification levels, and software to certify such systems, equipment or software.

Multi-level and user isolation parameters were recently deleted from 5A002 as no longer warranting that level of control. 5D002.c.2 controls software to certify software having the characteristics, or performing or simulating the functions of 5A002 equipment.

XIIIb5 Ancillary equipment specially designed for the articles in paragraphs (b)(1) - (b)(4) .
 “Ancillary” is an undefined term.

XIII.d Ablative materials, as follows (MT):

1. Ablative materials fabricated or semi-fabricated from advanced composites (e.g., silica, graphite, carbon, carbon/carbon, and boron filaments) “specially designed” for the articles in Category IV; or
2. Carbon/carbon billets and preforms which are reinforced with continuous unidirectional fibers, tows, tapes, or woven cloths in three or more dimensional planes.

Note: This does not control carbon/carbon billets and preforms where reinforcement in the third dimension is limited to interlocking of adjacent layers only.

This proposal combines existing IV.f and XIII.d. To avoid double coverage, IV.f would have to be deleted. This proposal is marked MT. It is related to, but differs from, MTCR 6.A.2 and 6.C.2. It is recommended that proposed XIII.d be revised as follows to conform with MTCR and to recognize that unfabricated materials are dual-use:

XIII.d Resaturated pyrolyzed (i.e., carbon/carbon) components designed for rockets and usable in rockets with a “range” equal to or greater than 300 km and materials fabricated or semi-fabricated therefor.

0C617.b Resaturated pyrolyzed (i.e., carbon/carbon) materials designed for rockets and usable in rockets with a “range” equal to or greater than 300 km not controlled by USML XIII.d.

XIII.e Armor ...

Categories VI and VII also control armor. To avoid double coverage, “, not controlled by Categories VI or VII,” should be inserted after “Armor”

XIII.f Classified item

Export controls are unenforceable if the exporter had not been informed that the item is classified. If the exporter knew it was classified, enforcement should be pursuant to the rules on classification.

XIII.g Concealment and deception equipment, as follows (MT) and

XIII.i Signature reduction software, technical data, and services as follows (MT):

Stealth MTCR Item 17 is completely covered by CCL ECCNs 1A101, 1C001, 1C101, 1D103, 1E001, 1E101, 6B008, 6B108, 6E001, 6E002, 6E101. Related Controls paragraphs in these ECCNs refer to “similar” items being subject to the jurisdiction of the Department of State but do not state that any portion of these ECCNs is subject to State jurisdiction. Therefore, “(MT)” should be deleted from both XIII.g and XIII.i. Also, in the heading of XIII.i, software is redundant, since software is included in the 120.10 definition of technical data.

XIII.j2 Specially treated or formulated dyes, coatings, and fabrics used in the design, manufacture, or production of personnel protection clothing, equipment, or face paints designed to protect against or reduce detection by radar, infrared, or other sensors at wavelengths greater than 900 nanometers.

The clothing portion of XIII.j.2 is duplicated in USML Category X.a.2

XIII.j3 Equipment, materials, coatings, and treatments that are “specially designed” to modify the electro-optical, radio frequency, infrared, electric, laser, magnetic, electromagnetic, acoustic, electro-static, or wake signatures of defense articles or military items subject to the EAR through control of absorption, reflection, or emission.

The materials portion of XIII.j.3 is partially covered by 1C001 and 1C101.

XIII.l Technical data (as defined in 120.10 of this subchapter) and defense services (as defined in 120.9 of this subchapter) directly related to the defense articles enumerated in paragraphs (a) through (h), (j), and (k) of this chapter. (See also 123.20 of this subchapter.) (MT for technical data and defense services related to articles designated as such.)

“Technical data” is defined in 120.10 to include not only “technical data” as defined in 772.1 of the EAR but also software. WML and MTCR rules for software differ from those for technology, which include technical data. For example MTCR controls technology but not software for thermal batteries.

The undefined term “directly related” contrasts with CCL and WDUL use of “according to the General Technology Note (GTN).” The GTN includes the defined word “required.” The WML uses “required.”

123.20 states that the provisions of this subchapter do not apply to the portions of VI.e and XVI which are under the jurisdiction of DOE or NRC. There does not appear to be any portion of XIII.l to which 123.20 would apply. If there were, 123.20 would be an exception from the XIII.l control, rather than just a cross-reference.

MT is not applicable to technical data related to the non-MT portion of XIII.d nor to any portion of XIII.g, MT is also not applicable to the software portion of technical data for the MT portion of XIII.d and for XIII.h.3.

(3) Proposed coverage not now included in the WML or the MTCR Annex

XIII.b Information security

XIII.d Ablative materials non-MT portion

XIII.e Armor

- XIII.f Classified material
- XIII.g Concealment and deception equipment
- XIII.h Energy conversion devices except thermal batteries
- XIII.i Signature reduction software, technical data, and services.
- XIII.j Equipment, materials, coatings, and treatments
- XIII.k Tooling and equipment
- XIII.l Technical data for the above and software for the MT portion of XIII.d ablative materials and for XIII.h.3 thermal batteries
- 0A617.a To the extent that others might not construe construction equipment specially designed for transport in controlled aircraft as specially designed for military use.
- 0A617.a Construction equipment parts, accessories, and attachments
- 0A617.a Crew protection kits used as protective cabs
- 0A617.b Concealment and deception equipment
- 0A617.d Test models other than for WML 4, 6, 9, or 10
- 0A617.e Photointerpretation, stereoscopic plotting and photogrammetry equipment
- 0A617.f Metal embrittlement agents
- 0A617.y.3 Power-controlled searchlights
- 0A617.y.99
- 0B617.a Test, inspection, and production equipment for the above
- 0B617.y.99
- 0C617.a Materials for signature suppression
- 0C617.y.99
- 0D617.a Software for the above portions of 0A617.a and .d, 0B617.a, and 0C617.a and for all of 0A617.b, e, f

- 0D617.y.1 Software for 0A617.y.3, y.99, 0B617.y.99, and 0C617.y.99
- 0D617.y.99
- 0E617.a Technology for the above portions of 0A617.a and .d, 0B617.a, 0C617.a, and 0D617.a and for all of 0A617.b, e, f
- 0E617.y.1 Technoloigy for 0A617.y.3, y.99, 0B617.y.99, 0C617.y.99, the above portion of 0D617.y.1, and all of 0D617.y.99
- 8A620.f Self-contained diving and underwater swimming apparatus
 Proposed 8A620.f coverage of WML17.a.1 and 2 omits this
 WML 17.a chapeau, thereby expanding coverage by removing one of the
 conditions for control.



Friday, June 29, 2012

Subject: Regulatory Change, USML Category XIII

REDCOM Laboratories, Inc. submits these public comments on public notice 7883 published in the Federal Register, Vol. 77, No. 97, May 18, 2012, page 29575:

1. ***We strongly endorse the concept of positive control lists which describe controlled items using objective criteria and precise descriptions rather than broad, open-ended, subjective, or design intent-based criteria.***

But we submit that parts of the proposed Category XIII(b) do not satisfy the effort to utilize “positive control lists.” Specifically:

- a. The introductory paragraph for Category XIII(b) should omit the terminology “‘specially designed’ for military applications.” Just because the military may be the first entity to order an item should not render the item to be highly export-controlled unless there is a technical or strategic reason that the item could not be generally used in a non-military setting.
 - b. In the introductory paragraph for Category XIII(b), the parenthetical, “e.g., command control and communications (C³), and government intelligence applications” is unnecessary. If specific military applications need to be incorporated, they should be comprehensively identified, not by means of an open-ended example. It is appropriate to insert specific applications under each of the three categories described in the parenthetical and to include all “examples”.
 - c. In the introductory paragraph for Category XIII(b), if the government is attempting to distinguish between “military” command control and communications systems and “non-military” command, control and communications systems, ***a clear distinction should be established.*** In today’s world, the commercial market uses many “military” features and the military market uses many “commercial” features; the line is very blurred. The proposed wording is ambiguous. For example, disaster recovery applications can and do require “command and control communications systems.”
2. In Category XIII(b)(1), XIII(b)(2), XIII(b)(3), the terms “military cryptographic” and “military cryptanalytic” are vague. With widespread use of cryptography in non-military applications, the distinction between “military cryptography” and “non-military cryptography” leaves too much discretion to self-classifiers. If some cryptographic items are to be included on the USML, and others are to be subject to the EAR¹, then a clear delineation is needed.

¹ EAR CCL = Export Administration Regulations

3. The proposed Category XIII(b)(4) refers to items “that provide certified or certifiable multi-level security, user isolation, or control of the exchange of or access to information between or among systems operating at different classification levels...” The current USML for this section reads, “...certified or certifiable multi-level security or user isolation exceeding Evaluation Assurance Level (EAL) 5 of the Security Assurance Evaluation Criteria...”

The proposed revision is more ambiguous than the current version. In the current version, the reference to the “Security Assurance Evaluation Criteria” gives specificity to the meaning of “certified” or “certifiable.” Removing reference to the “Security Assurance Evaluation Criteria” results in significant ambiguity—“certified or certifiable” by whom? Against what standards? What is “multi-level security?” ***Perhaps*** a specific term that could be used here is “CAL/SAL (Confidential Access Level/Security Access Level). This would at least clue-in the commodity classifier as to what the USML intends to protect in this section.

4. We submit that while the “substantial military or intelligence advantage” which derives from the underlying Category XIII(b)(1), XIII(b)(2), XIII(b)(3), XIII(b)(4) defense articles may need to be protected by strong export controls, the “ancillary equipment” described by Category XIII(b)(5) does not warrant control by the USML, as they are minor elements that could, indeed, be unencrypted in their own right.

Consider, for example, the case of an interface for a telephone system that is “designed to work with a military encryption device.” Under both the current Category XIII(b)(5) and the proposal, this interface is/would be on the USML. Yet, the ***EXACT*** same interface also works with virtually identical non-military encryption devices which themselves are controlled under the EAR. This results in the interface being on the USML simply by virtue of the part being designed for the military encryption device before the EAR-controlled versions of the encryption device were available; that is, it is an application of the first-to-buy rule which serves no purpose worthy of strong export-controls.

Respectfully submitted,

VP Business Development; ITAR Empowered Official

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July 2, 2012

Ms. Candace M. J. Goforth
Director, Office of Defense Trade Controls Policy
Directorate of Defense Trade Controls
Department of State
2201 C Street, NW
Washington, DC 20520-0001

Subject: "ITAR Amendment—Category XIII"
Reference: Federal Register/Vol. 77, No.97/May 18, 2012

Dear Ms. Goforth,

The Boeing Company ("Boeing") welcomes the opportunity to comment on the referenced proposed revision to Category XIII of the United States Munitions List (USML), which will be renamed *Materials and Miscellaneous Articles* from the current *Auxiliary Military Equipment*. We appreciate DDTC's engagement with industry over the last two years of the reform process, and reiterate our commitment to assist in the reform process by providing comments on this and other proposed rules.

Generally, we welcome a simplified, more narrowly-scoped, positive-list Category XIII. We support the transfer of certain items to other, more relevant categories, and recognize the overall clarity of the qualifying language, as well as the inclusion of additional interpretations.

As requested in the proposed rule, our comments are based on the parameters of the definition of the term "specially designed" as promulgated in the Advance Notice of Proposed Rulemaking published in the Federal Register in December 2011. Generally, we concur with the position expressed that the term should be used minimally in the USML and only to remain consistent with the Wassenaar Arrangement or other multilateral regime obligation or when no other reasonable option exists. We also note that the Department has recently published a new proposed rule seeking specific comments on this defined term. We are reviewing this subsequent proposed rule and preparing to submit written comments.

Specifically, we respectfully submit the following comments and recommendations:

- **Paragraph (d)** – Ablative Materials: Semi-fabricated carbon/carbon is controlled by paragraph (d)(1), and there is no mention of carbon billets in that paragraph. Paragraph (d)(2) covers reinforced carbon/carbon billets. If a billet is a semi-fabricated form, it may be helpful to clarify that it, too, is controlled under paragraph (d)(1) to avoid the possibility of double coverage and potential confusion.
- **Paragraph (g)(1)** – Polymers loaded with carbonyl iron powder, ferrites, iron whiskers, fibers, flakes, or other magnetic additives having a surface resistivity of less than 5000 ohms/square and isotropy of less than 5%: The concern is that there is no lower resistance boundary defined



for the loaded polymers. Without a lower limit, conductive materials would also be included in the UMSL by default. Iron conductive polymers (e.g. <10 ohms/square) are being evaluated for commercial use for battery electrodes, nonlinear optics, as well as electrical and magnetic shielding. Because of their dual-use nature and commercial applications, we recommend that conductive polymers be transferred to EAR jurisdiction.

- **Paragraph (h)** – Energy Conversion Devices: The fundamentals of energy conversion devices (ECDs) are well known, and research into the technology is being published globally in open journals. In addition, many of the materials and products are currently being purchased from global suppliers. Given this environment, we would recommend that these devices, unless specifically designed for a military application, be more appropriately transferred to EAR jurisdiction.
- **Paragraphs (i)(1) and (i)(3)**– Software associated with the measurement or modification of system signatures and software for design, analysis, prediction, or optimization of signature management solutions: Boeing presumes this entry is not intended to control software used to analyze, predict, and reduce levels of environmental noise pollution such as that regulated by other agencies. Such noise emissions are not reduced to change the detection signature of civil aircraft but rather to reduce negative environmental impacts stemming from commercial jet transport operations. As written, however, the language appears to unintentionally capture the scenario above; therefore, we recommend that it be revised to reflect this necessary exclusion.
- **Paragraph (k)(1)** – Tooling and equipment “specially designed” for production of Low Observable (LO) components:
 - Tooling associated with the manufacture of Low Observable (LO) structures is common to composite structure tooling use in non-LO applications for both military and commercial aircraft. Since each piece of tooling is “specially designed” for the shape of the structure, any tooling used in the production of LO structures would be considered ITAR. We recommend that such equipment be transferred to EAR jurisdiction.
 - Test equipment used for signature validation, such as commercially-available spectrum analyzers, does not have any military unique/LO capabilities. We recommend that such equipment be transferred to EAR jurisdiction.

Thank you for the opportunity to provide comments. Please do not hesitate to contact me if you have any questions or need additional information. I can be reached at 703-465-3505 or via e-mail at stephanie.a.reuer@boeing.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephanie A. Reuer". The signature is fluid and cursive, with a large loop at the beginning.

Stephanie A. Reuer
Director, Global Trade Controls

July 2, 2012

Ms. Candace M.J. Goforth
Director, Office of Defense Trade Controls Policy
Department of State
2401 E Street, NW
Washington, D.C. 20522

SUBJECT: RIN 1400-AD13
Regulatory Change USML Category XIII

Dear Ms. Goforth:

We appreciate the opportunity to comment on the above proposed rule to modify the International Traffic in Arms Regulations (ITAR), U.S. Munitions List (USML) Category XIII. We have organized our comments into distinct categories, given the breadth of items within this USML Category:

Cryptographic Equipment

- 1) We recommend that military cryptographic equipment be identified by key technical characteristics including reference to military encryption algorithms, as the current proposed description in (b)(1) would encompass commercially available equipment. We also urge identification of a specific encryption level or combination of encryption functionality exceeding commercially available encryption software products, or incorporation of commercially available software with specific military equipment and functionality, such as that described in (b)(2).
- 2) The military systems identified in (b) (4) should retain a technical performance threshold consistent with the current USML category description “exceeding Evaluation Assurance Level (EAL) 5 of the Security Assurance Evaluation Criteria, and software to certify such systems, equipment, or software.
- 3) The term “ancillary equipment” should be defined or else identified as parts, components, accessories, attachments consistent with other references in the ITAR, and incorporate the requirement the items in the category meet the criteria for items “specially designed” for use with end items in (b)(1)-(b)(4).

Materials - Armor

- 1) Developmental armor funded by a U.S. Department of Defense contract should not automatically be controlled under the ITAR. We recommend this be revised consistent with other armor provisions on the USML to state “Development armor that exceeds NIJ Level III-a developed under a Department of Defense contract”.
- 2) Consistent with current references in Category X of the USML, we recommend that (e)(2) be modified to read “Spaced armor with Em greater than 1.4 and meeting greater than NIJ Level III-a”;
- 3) Consistent with current Category X of the USML, modify (e)(3) to read “Transparent armor having Em greater than or equal to 1.3 or having Em less than 1.3 and meeting NIJ Level III-a or better with areal density less than or equal to 40 pounds per square foot”;
- 4) Incorporate “NIJ Level III-a or better” as the standard for the composite armor and metal laminate armor identified in (e)(6) and (e)(7).

Materials

- 1) We suggest that (f)(3) be modified to identify that unclassified materials developed with classified information are controlled on the basis of meeting identified technical parameters for inclusion on the USML. The technical data would be subject to the ITAR, and the end product may be identified by its technical parameters either on the USML or the 600 series Commerce Control List.
- 2) (g)(1) Concealment and detection equipment, as follows(MT) should be modified to address the difference between conductors and absorbers in terms of the material signature reduction and suggest the following language for this entry:
 - *(1) Polymers loaded with carbonyl iron powder, ferrites, iron whiskers, fibers, flakes, or other magnetic additives having a surface resistivity of 10 ohms/square to 5000 ohms/square and isotropy of less than 5%

Technical Data and Defense Services

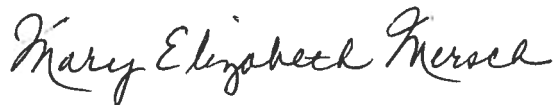
- 1) (i)Technical data, software and services should be described consistent with other USML category proposals;
- 2) We suggest that (i)(2) be modified to read “Software developed for design, analysis, prediction or optimization of signature management solution.” The language proposed is overly broad and could inadvertently capture current mass market software (such as CATIA) used for optimizing shape, but not designed specifically for signature reduction.

Other Equipment, Materials, Coatings, etc. not elsewhere specified

- 1) We suggest that (j)(1) articles should be moved to Category X of the USML, personal protective equipment, and be described consistent with the technical parameters that identify these items as distinct from items such as welding goggles commercially available with an optical density that exceeds 6.

Should clarification or subsequent technical discussions be necessary, please contact me at beth.mersch@ngc.com, or 703-280-4056, and we will engage the appropriate individuals.

Sincerely,

A handwritten signature in cursive script that reads "Mary Elizabeth Mersch".

Mary Elizabeth Mersch
Director, Export Operations



July 2, 2012

Submitted Via E-Mail (DDTCResponseTeam@state.gov)

Attn: DDTC Response Team
Directorate of Defense Trade Controls
U.S. Department of State

Re: RIN 1400-AD13: Comments on Amendment to the International Traffic in Arms Regulations: Revision of U.S. Munitions List Category XIII

Lockheed Martin Corporation (Lockheed Martin) is pleased to submit comments on the proposed rules issued by the U.S. Department of Commerce, Bureau of Industry and Security and by the U.S. Department of State, published in the Federal Register on Friday, May 18, 2012 (77 Fed Reg. 97.) Taken together, the proposed rules describe the articles that warrant continued control under Category XIII (Auxiliary Military Equipment) of the U.S. Munitions List (USML) and address how articles that are no longer controlled under Category XIII would be controlled under the Commerce Control List (CCL).

The proposed rules to modify Category XIII and create new Export Control Classification Numbers (ECCNs) 0A617, 0B617, 0C617, 0D617, and 0E617 as part of the new “600 series” of controls on the CCL continue the significant effort undertaken by the Departments of State and Commerce to create an export control system that strengthens U.S. national security and focuses export license requirements on the items of greatest sensitivity.

Lockheed Martin expects that the proposed modifications to the existing control lists will help to streamline export licensing for certain parts and component suppliers that support our systems and programs in many countries. However, it is imperative that revisions to the control list consider how the proposed control parameters not only capture the items of greatest concern but also reflect market conditions and industry standards in order to ensure that the potential benefits of list reform are passed along to these suppliers. As currently written, the proposed changes to Category XIII essentially stay within the current scope of the USML, resulting in only a small number of items proposed to be moved to the “600 series” on the CCL. Jurisdictional clarity will provide few benefits for U.S. exporters if items that no longer warrant control as munitions items continue to be identified on the USML.

Moreover, one of the guiding principles of export control list reform efforts has been to ensure that more items are not controlled as munitions items than are currently controlled on the USML, with few exceptions. When crafting revisions to the “auxiliary” and “miscellaneous” control categories, this principle is paramount to ensure that controls do not become unnecessarily inclusive. Indeed, efforts to add broad categories of control within the new ECCNs may inadvertently create extensive new controls on some items not currently subject to the USML, such as certain software programs.

Finally, the proposed rule highlights the importance of clarity to the export control list reform effort. Several new terms have also been introduced in the proposed rule (e.g., “multi-layer camouflage systems,” “soldier systems,” “tooling,” etc.) without sufficient definitions, which will make it more difficult for U.S. exporters to identify at which point in the process a license may be required. In addition the proposed rule is lacking “bright lines” in a number of entries, which will make it more difficult for exporters to assess the jurisdictional status of individual articles. For example, undefined terms, such as “low observable,” “methodologies,” and “techniques,” without additional control criteria do not provide a clear definition of control.

Accordingly, Lockheed Martin provides the following specific comments on the proposed rules that modify USML Category XIII and create five new ECCNs in the “600 series” of the CCL.

I. RECOMMENDED CHANGES TO THE PROPOSED RULES

A. USML Category XIII

1. Section (e)(1): Developmental Armor

This new proposed entry covering “developmental armor” provides no positive criteria, but simply applies the control to products developed under a contract with the Department of Defense (“DoD”). Accordingly, the acceptance of any DoD funding apparently would provide the basis for determining jurisdictional control. Without a clear delineation of when the “developmental” phase for such programs begins, this could be overbroad. For example, if a company accepted basic research funding from DoD to develop a new material, which ultimately did not meet the military requirements (e.g., NIJ levels), but eventually has applications in a commercial market, it would remain controlled under the USML. Such items are good examples of why the “600 series” is being created. Universities could also be affected by these controls when undertaking fundamental research programs for DoD. Since sub-items (e)(2) thru (e)(7) provide positive criteria, there is no apparent value added by (e)(1). Lockheed Martin recommends that section (e)(1) be deleted.

2. Section (f): Classified Items

The proposal would represent a significant expansion of the current USML controls related to classified materials. Currently, Category XVII(a) covers “all articles, technical data ... and defense services ... which are classified in the interests of national security and which are not otherwise enumerated in the U.S. Munitions List.” The proposal would maintain the control on classified materials, but would add new controls on material that “is manufactured using classified production data” or “is being developed using classified information.”

There are three principal concerns regarding this expansion. First, the rule could be interpreted to apply where the U.S. Government has developed the requirement based on classified information (e.g., threat analysis) and shares some of that classified information with the manufacturer, even though the classified information is not directly related to the manufacturing of the material. Manufacturers would have to treat material as subject to the ITAR if they had ever received any classified information relating to the U.S. Government

requirement. Considering the proposed wording (i.e., “is being developed using classified information”), it is possible that the control would apply if the U.S. Government’s requirement is based on classified information even if such classified information is not shared with the manufacturer.

Second, the rule could result in different controls on identical material based on what information is known by the manufacturer. For example, if one manufacturer received classified production data, but the other did not, it appears that the first manufacturer’s material would be controlled on the ITAR but the second manufacturer’s identical material would not.

Third, from a national security standpoint, the control over a material should depend on the classified nature of the material, and not on the nature of the information used to produce the material. If an exporter cannot determine the classified information from the material, then the fact that classified information was used to produce the material is irrelevant to the appropriate level of control on the material. An item should be controlled based on its performance and sensitivity to U.S. national security, not based on the classified production parameters of development. Lockheed Martin therefore recommends that section (f) be limited to sub-item (f)(1) – classified items – and that (f)(2) and (f)(3) be deleted for both their ambiguity and overbreadth. Retaining just sub-item (f)(1) would avoid a significant expansion of the USML beyond the current controls and provides sufficient guidance for exporters to ensure continued control of classified materials on the USML.

3. Section (g): Concealment and Deception Equipment

Controls on polymers identified in (g)(1) are appropriately focused on absorption capability. However, a minimum value should be included in the control to provide a distinction between materials that absorb and those that conduct. Without the lower parameter, this sub-item could result in controlling materials used for basic electrical applications. A suggested breakpoint between conduction and absorption in materials is approximately 10 ohms/square. In addition, since composite materials are quasi-isotropic the inclusion of the term “electrical” is necessary to minimize and confusion. Recommended change:

“(1) Polymers loaded with carbonyl iron powder, ferrites, iron whiskers, fibers, flakes, or other magnetic additives having a surface resistivity of less than 5000 ohms/square and greater than 10 ohms/square with electrical isotropy of less than 5%”

In (g)(2), “multi-layer camouflage systems” is an undefined term. In general, multispectral camouflage nets are made of multiple layers of coated fabrics. The proposed wording does not provide sufficient guidance for export control parameters, i.e., it is unclear whether individual nets and/ or coated fabrics are controlled or whether the control is only applicable when multiple layers are composited together to meet a particular military requirement (i.e., “specially designed.”) Without a clear definition and the addition of positive criteria, exporters will have difficulty in determining licensing requirements.

Finally, in (g)(4), without specifying a specific bandwidth for this sub-section of magnetic absorption material, exporters may interpret this item (greater than 30 percent

bandwidth) as covering the entire spectrum. A specific bandwidth should be included in this sub-item.

4. Section (h): Energy Conversion Devices

Lockheed Martin recommends that the proposed controls on energy conversion devices be deleted. Although foreign availability is not, by itself, a sufficient criterion for removal from the USML control, there are sufficient foreign suppliers of these types of energy devices to warrant control on the CCL. Indeed, for some listed items, such as thermal batteries, the United States is dependent upon foreign suppliers due to the lack of domestic suppliers. These relatively low-sensitivity items are good candidates for the “600 series” of control.

5. Section (i): Signature Reduction Software

Items identified in this section should be limited to software related to specific articles controlled on the USML for reduced observability (e.g., Category VIII stealth aircraft) and the software limited to those programs that are “specifically designed” for signature reduction, not structural design. As currently drafted, section (i) could result in the control of general purpose software design and test programs, especially with respect to composite structural design programs, that are not currently controlled on the USML. For instance, proposed section (i)(2) would control “software for design of low-observable platforms”. This language could apply to any and all software used to design a low-observable platform, even if the software is not related to signature reduction.

Moreover, proposed Category XIII controls on signature reduction software may be redundant, as Category VIII(i) controls “technical data” directly related to the low-observable platforms controlled under VIII(a). “Technical data” includes software, per 120.10(a)(4). Section (l) of the proposed Category XIII also controls technical data for the all other sections of this category. This lack of consistency creates confusion. Accordingly, sub-item (i) should either be included as a sub-set of XIII(l) or be eliminated in its entirety.

In addition, the terms “signature control design methodology,” “signature management techniques,” and “signature management solutions” require further clarification. As currently proposed, U.S. exporters would have significant difficulty in determining what aspects of “signature reduction software, technical data and services” are considered Significant Military Equipment (SME) and the applicable licensing requirements. Without a more precise control, the proposed rule could capture items that are not currently considered SME, which would constitute a further expansion of controls.

6. Section (j): Equipment, Materials, Coatings NES

In (j)(1), the optical density factor (“greater than 3”) will result in the control of standard commercial products, such as welding visors. Additional distinguishing criteria or clarifying note should be added that excludes items that have performance equivalence to those used in general industrial practices. Without additional clarification or more limiting technical

parameters, this entry will require exporters to file commodity jurisdiction requests for standard industrial safety equipment.

In addition, identification of subcategory (j) as Significant Military Equipment (SME) should either be deleted or narrowed. If implemented as currently proposed, U.S. companies would be faced with significant new licensing burdens, including requirements to identify specific quantities of SME for these raw material or parts, provide Nontransfer and Use Certificates to obtain authorization, and increase the applications notified to Congress, due to reduced value thresholds on sales and for all manufacturing license agreements involving production abroad. Section (j) will also introduce confusion regarding licensing requirements if elements of an end item are SME when the end item itself is not. For example, items covered in the proposed regulations under (j)(2) used in the production of personnel protective clothing and equipment are SME, but the end items in the current and proposed Category X are not. Accordingly, the Department of State should consider moving this entry to USML Category X (“Personal Protective Equipment and Shelters”).

Items to be controlled by (j)(3) are ambiguous. Without further clarification as to what is meant by “equipment,” “materials,” “coatings,” and “treatments,” when the control covers the entire spectrum as well as items on the EAR, implementation would be extremely difficult. This item should be removed, due to the broad coverage of items.

7. Section (m): Definitions

Recommend that section (m)(4) be deleted; “electromagnetic armor” is not identified in this Category and does not require further explanation in this category.

B. Commerce Control List: ECCN 0A617

1. ECCN 0A617(a): Construction Equipment

The imposition of controls on “construction equipment” designed to fit on military cargo aircraft is expected to control a substantial amount of common construction material not currently controlled on the USML, subjecting these items to a worldwide licensing requirement, except for Canada. For example, a simple mobile crane designed to fit within a USML-controlled cargo aircraft would be subject to this entry simply on the basis of size. These items are precisely the type of militarily insignificant equipment that does not warrant the application of such a stringent control.

2. ECCN 0A617(d): Test Models

Without further clarification of what is a “test model,” this control could have a significant licensing impact on all USML-controlled programs – as well as some systems controlled on the EAR. As currently written, “test models” could include both physical as well as standard computer test models/programs. Exporters would be required to obtain licenses for computer test models that are simply validating form, fit and function, or dynamic physical properties of an end item (e.g., standard computational fluid dynamic programs).

Currently, “test models” for USML items are controlled under the ITAR as technical data, if it is software, or within a specific USML Category, if it is a physical model. Accordingly, this sub-item should be deleted, as current USML and EAR controls are adequate to control sensitive test models.

II. CONCLUSION

Thank you for the opportunity to provide comments on the proposed rules. Lockheed Martin remains committed to supporting the ongoing efforts to clarify and update the current export control lists, and we look forward to reviewing additional proposed rules that will have a substantial, positive impact on our ability to support U.S. national security programs and international defense trade priorities.

Sincerely,

A handwritten signature in cursive script, reading "Gerald Musarra", followed by a horizontal line extending to the right.

For Lockheed Martin Corporation
Gerald Musarra
Vice President
Government and Regulatory Affairs

Franklin Vargo

Vice President

International Economic Affairs

July 2, 2012

Ms. Candace M. J. Goforth
Acting Director, Office of Defense Trade Controls Policy
Department of State
Washington, DC 20520

Re: ITAR Amendments – Category XIII (RIN 1400-AD13)

Via email: DDTCTeam@state.gov

Dear Ms. Goforth:

The National Association of Manufacturers (NAM) welcomes the opportunity to comment on amendments to the International Traffic in Arms Regulations (ITAR) and the proposed rule for Category XIII, intended to better describe materials and miscellaneous articles that warrant control on the United States Munitions List (USML).

The NAM is the nation's largest industrial trade association, representing small and large manufacturers in every industrial sector and in all 50 states. Our members play a critical role in protecting the security of the United States. Some are directly engaged in providing the technology and equipment that keep the U.S. military the best in the world. Others play a key support role, developing the advanced industrial technology, machinery and information systems necessary for our manufacturing, high tech and services industries. The NAM has long been a staunch advocate of rational export control policies that address evolving national security concerns and modern business practices.

We note that "software" is mentioned specifically in several sub-paragraphs, as if it were hardware rather than being limited to the definition of technical data. The NAM believes this approach will cause unnecessary confusion about whether software – if it is deemed not to be technical data – will be regulated by these entries or if the State Department's intent is to indicate that not all software is technical data. Based on that determination, other USML categories that do not specifically enumerate software might be misinterpreted to mean that related software is not controlled. We strongly recommend these stand-alone references to software be removed from the category to avoid such confusion. Software is defined as technical data and is controlled as such in all other USML categories.

The word "equipment" is used in several entries, but it is not a defined term. Defined terms include end items, parts, components, accessories, attachments, and systems. This issue is even further confused when coupled with the term "system." For example, XIII(b) reads "information security/information assurance systems and equipment..." Given that "systems" are defined as a combination of end-items, parts, components, and accessories, and end-items are not enumerated in the sub-category, compliance officials could likely be confused about whether information security/information assurance end items are covered by the USML or whether only systems comprised of those end-items are controlled.

More specifically:

Leading Innovation. Creating Opportunity. Pursuing Progress.

- Section XIII(h) outlines energy conversion devices. One of the objectives of the Export Control Reform Initiative is to provide a “bright line” between control regimes, and to control only those items of a truly unique military nature on the ITAR. Fuel cells, thermal engines, thermal batteries, and thermionic generators are not of a unique military nature, regardless of being “specially designed” for platforms or soldier systems specified elsewhere in the USML. These technologies are commercially available from many sources in the U.S. and world-wide, and they should not be listed on the USML. We recommend the entry be deleted.
- Section XIII(i) describes signature reduction software. Please see our previous comments regarding software being separately enumerated from technical data. Additionally, we are concerned that the sub-paragraph includes vague and undecipherable entries. If the intent of the Department is to regulate military stealth technology, we recommend this paragraph be deleted. The stealth articles to be regulated should be enumerated in the individual categories, like in USML Category VIII for aircraft. The technical data related to the design, production, and manufacture of those controlled articles – including software – and the related defense services would also be regulated there, consistent with the rest of the USML.
 - Further, Section XIII(i) does not have any requirement for the signature reduction software designated to be of a unique military nature. Therefore, any signature reduction software – including many commercial software products for purely commercial signature reduction – would be captured here. For example, engineering software designed to optimize commercial buildings to reduce the infrared signature to lower building heating costs would be captured here. Software used to assist commercial aircraft manufacturers in reducing their acoustic signature for commercial noise reduction needs would also be captured.
 - Section XIII(i)(1) enumerates software associated with the measurement or modification of system signatures. There is no requirement for the software to be uniquely responsible for the measurement or modification of system signatures, just simply associated with it. There is no requirement for the system to be a defense article, either. It must simply be a system. Finally, there is no specificity as to the signature. As written, this entry could quite possibly capture any design software for any article, commercial or military.
 - Section XIII(i)(2) describes software for the design of low observable (LO) platforms. There is no published definition of what constitutes a LO platform. As written, this entry could include design software for commercial radio controlled aircraft sold at any toy store.
 - Section XIII(i)(3) describes software for the design, analysis, prediction, or optimization of signature management solutions. We are very concerned that this section lacks an objective, positive criteria or even a definition as to what constitutes a signature management solution.
 - Section XIII(i)(5) describes signature management techniques, codes, and algorithms. Again, there is no positive criteria or definition to confine the term “signature management” or the specific techniques, codes, and algorithms that are to be controlled.
 - Section XIII(i)(6) describes signature control design methodology. Again, there is no positive criteria limiting this entry to defense articles. There is also no definition for the signature control to be regulated. Additionally, we would suggest that design methodology is technical data and/or a defense service. Enumerating it separately as such adds significant confusion to the USML itself.
 - Section XIII(i)(7) describes processes that use micro-encapsulation. Again, there is no positive criteria limiting this entry to defense articles nor any limitation on the level of reduction. The entry simply reads “to reduce infrared, radar, or visual detection.” As with the above, a “process” is technical data and/or a defense service. Enumerating it separately in this category adds significant confusion.

- Section XIII(i)(8) describes multi-layer camouflage system techniques to reduce detection of platforms and equipment. Given the lack of definition and positive criteria, this entry could encompass everything from techniques associated with leading edge military stealth platforms to those associated with hunters using layers of camouflage in the woods to avoid detection by wild animals.
- Section XIII(i)(10) and (11) describe shaping techniques. There is no limitation that such techniques be unique to defense articles and no other positive criteria to limit the scope to prevent such signature reductions for commercial purposes, like noise abatement. The entries as written also would appear to capture techniques like reducing the electro-magnetic signature of an electrical power supply for the simple purpose of ensuring it does not interfere with other electrical components in close proximity. The term “Low Probability of Intercept (LPI)” is also undefined.
- Section XIII(j)(1) covers laser eye-safe media, including narrow band dyes/coatings and wide band non-linear optical material “specially designed” for goggles. The criteria for controlled laser eye-safe goggles include the presence of narrow band or wide band non-linear coatings and a requirement that they have an optical density greater than 3. As written, this entry would appear to capture every commercial laser safety goggle on the market today. One company, for example, makes green, laser eye-safe goggles with an optical density of greater than 6 in the 0.2-0.4 μm and 0.9 -1.1 μm band widths. We recommend this entry be deleted as laser eye-safe media is not something unique to the military or something that should warrant control under the ITAR.
- Section XIII(k) covers Tooling and Equipment. This entry should be deleted, since technical data related to the design, manufacture, production, etc. of the articles is controlled elsewhere on the USML. Controlling all tooling and equipment that is “specially designed” will capture many commercial tooling and equipment articles where the modification or other change making it “specially designed” are purely commercial changes for commercial reasons that in no way reveal any technical data controlled under the subchapter.

The NAM appreciates this opportunity to provide comments on the proposed rule for USML Category V. We look forward to continuing to work with the State Department and its partners on this important initiative.

Thank you,



Frank Vargo



DRS Technologies, Inc.
Trade & Security Compliance Office
2345 Crystal City Drive
Arlington, VA 22202

July 2, 2012

Mr. Robert S. Kovac
Managing Director
PM/DDTC, SA-1, Room 1200
Directorate of Defense Trade Controls
Bureau of Political Military Affairs
U.S. Department of State
Washington, DC 20522-0112

Subject: Response to the Proposed Amendment to the International Traffic in Arms Regulations: Revision of U.S. Munitions List Category XIII - 77 FR 29575, RIN 1400-AD13

Dear Mr. Kovac:

DRS Technologies, Inc. is fully supportive of the U.S. Government efforts to reform the regulations and systems for controlling exports. As a 10,000+ employee company with products and customers in both the international commercial and defense markets, we are very familiar with the current export control systems. The reforms are much needed to help the U.S. export control apparatus stay in step with the ever evolving and changing global markets and national security climates.

The proposed rule revising USML Category XIII appears to be a departure from prior proposed revisions to other USML categories. Contrary to the goal of adding clarity to U.S. export regulations, there is a great deal of vague language used in several areas that will increase confusion regarding export jurisdiction in excess of the present level. Additionally, there are many entries that enumerate software, technical data and defense services rather than the historic approach of enumerating articles on the USML.

Creation of a revised U.S. Munitions List ("USML") based on positive criteria is critical to the success of the reform effort. The positive criteria put forth should be based on the unique military capabilities of an end-item, which is essentially their ability to operate in unique ways in hostile environments. Once defined, the end-item positive criteria would become the positive criteria for determining the level of control for lower level articles included in the complete defense article. The controls for every component, piece, part, software, or technology cited for control should have traceability through the positive criteria directly to the capabilities listed in the end-item as the reason for control.

To the maximum extent possible, a positive list should be void of the jurisdictional ambiguity that stems from use of the term “specially designed.” If there are no definitive, identifiable positive criteria directly traceable from a part or component to the unique military capability and end item, then those items should not be subject to control under the International Traffic in Arms Regulations (“ITAR”). Subjective catch all phrases such as “specially designed” are counter to the definition of a positive criteria list and exacerbate the lack of clarity that already exists within the USML.

A second factor to consider in the development of these positive lists is the worldwide commercial market. If end-items, parts, or components are available in the commercial market, the positive criteria should be reviewed for validity and necessity of ITAR control. The President, the Secretary of Defense, and other senior administration officials have repeatedly stated one of the goals is to place high walls around fewer things, essentially protecting the “crown jewels.” The phrase “crown jewels” was identified as items almost exclusively available from the United States that provide a critical military or intelligence advantage, with the term “critical” meaning that it provides a capability with respect to which the United States cannot afford to fall to parity and that would pose a grave threat to national security if not controlled. In our review of the draft proposed rule we found several entries that not only did not appear to meet this criteria, but are currently available commercially from many countries outside the U.S. We believe unilaterally controlling these items as defense articles would do nothing to protect U.S. national security while negatively impacting the U.S. industrial base by needlessly restricting it from competing equally against foreign commercial companies.

Specific Comments on USML Category XIII-Materials and Miscellaneous Articles

1. Overall comment: Software is called out separately in several sub-paragraphs, as if it were hardware, rather than being limited to the definition of technical data as is the case in all of the current and proposed USML categories. We believe this approach will cause unnecessary confusion as to what software, independent from the 22 C.F.R. §120.10 definition of technical data, will be regulated by these entries, or if the intent is to indicate that not all software is technical data. If this is the case then in all other USML categories that do not specifically enumerate software it might be misinterpreted that such software is not controlled. We strongly recommend these stand-alone references to software be removed from the category to avoid such confusion. Software is defined as technical data and is controlled as such in all other USML categories. The approach used in Category XIII should be consistent.
2. Overall comment: The word “equipment” is used in several entries. This is not a defined term within the ITAR. Defined terms are end items, parts, components, accessories, attachments, and systems. Utilizing an undefined term will result in confusion. Coupling the undefined term “equipment” with the term “system”, as drafted, will further increase confusion. For example, XIII(b) reads “information security/information assurance systems and equipment...” “Systems” is defined as a combination of end-items, parts, components, accessories, etc, yet the specific end-items to be controlled are not enumerated in the proposed sub-category. Accordingly, it is unclear whether information security/information assurance end items are actually covered by the USML or just such systems comprised of those end-items?

3. XIII(h), energy conversion devices. The purpose of export reform is to define those items of a truly unique military nature and control them as such. Fuel cells, thermal engines, thermal batteries, and thermionic generators are not of a unique military nature regardless of their being “specially designed” for platforms or soldier systems specified elsewhere in the USML. These items are commercially available from many sources in the U.S. and world-wide and accordingly should not be listed on the USML. We recommend the deletion of this section in its entirety.

4. XIII(i), signature reduction software. Please see comment 1 above regarding software being separately enumerated from technical data. We urge the department to delete this paragraph as it adds significant confusion as to what is and is not a defense article, not only for the specific below entries but across the broader USML itself. We have several additional concerns with the sub-paragraph including vague and undecipherable entries and entries that appear to enumerate design and manufacturing processes and techniques as defense articles. Design and manufacturing processes and techniques are controlled as technical data or defense services, in accordance with 22 C.F.R. §§120.9, 120.10, throughout the USML. Category XIII should not deviate. If the intent of the Department is to regulate military stealth technology, then inclusion in Category XIII is misplaced. The stealth articles to be regulated should be enumerated in the individual USML categories (e.g. Category VIII - Aircraft). The technical data related to the design, production, manufacture, etc. of those articles, to include software, and the defense services would also be regulated in the individual USML categories, consistent with the rest of the USML.
 - a. XIII(i) does not have a requirement for the signature reduction software designated to be of a unique military-only nature such that control under the USML is necessary. As a result, any signature reduction software, including many commercial software products for purely commercial signature reduction would be inappropriately controlled on the USML. For example, engineering software designed to optimize commercial buildings by reducing the infrared signature to lower building heating costs would be controlled for export under USML Category XIII, as would software used to assist commercial aircraft manufacturers in reducing their acoustic signature for commercial noise reduction needs. As noted above, we recommend the deletion of XIII(i) in its entirety, but at a minimum uniquely military positive criteria must be defined.
 - b. XIII(i) designates all sub-paragraphs as being SME. The entries are software, processes, and techniques for a broad range of activities. This unique approach is contrary to the rest of the USML and adds significant confusion to an already complicated subject area. We urge the department to follow the current USML format whereby software is controlled in accordance with the definition of technical data related to the articles to be controlled and processes and techniques would be controlled as technical data or defense services associated with those same articles. As such, the software would be designated as SME if it related directly to the manufacture or production of SME articles. As noted above, we recommend the deletion of XIII(i) in its entirety.

- c. XIII(i)(1) enumerates software associated with the measurement or modification of system signatures. There is no requirement for the software to be uniquely responsible for, just simply associated with the measurement or modification of system signatures. Additionally, there is no requirement for the system to be a defense article, simply a system. Finally, there is no specificity as to the signature. It could be anything ranging from visual to the end of the electromagnetic spectrum. As written this entry could quite possibly capture any design software for any article, commercial or military. As noted above, we recommend the deletion of XIII(i) in its entirety, but at a minimum be linked to positive criteria associated with a defense article.
- d. XIII(i)(2) software for the design of low observable platforms. There is no published definition of what constitutes a low observable platform. As written, this entry could include design software for commercial radio controlled aircraft sold at any toy store. As noted above, we recommend the deletion of XIII(i) in its entirety, but at a minimum define positive criteria for low observable platforms.
- e. XIII(i)(3) software for the design, analysis, prediction, or optimization of signature management solutions. This entry is void of positive criteria or even a definition as to what constitutes a signature management solution. As noted above, we recommend the deletion of XIII(i) in its entirety, but at a minimum identify positive criteria for signature management solutions.
- f. XIII(i)(5) signature management techniques, codes, and algorithms. Again, there are no identified positive criteria or definition of the term signature management or the specific techniques, codes, and algorithms to be regulated. As noted above, we recommend the deletion of XIII(i) in its entirety, but at a minimum identify positive criteria for signature management techniques, codes and algorithms.
- g. XIII(i)(6), signature control design methodology. Again, there are no positive criteria limiting this entry to defense articles or definition as to what is meant by signature control. Additionally, design methodology is technical data and/or a defense service and is controlled as such throughout all of the current and proposed USML categories. Enumerating it separately as such adds significant confusion to the USML itself. As noted above, we recommend the deletion of XIII(i) in its entirety.
- h. XIII(i)(7), Processes that use micro-encapsulation. Again, there are no positive criteria limiting this entry to defense articles or any limitation on the level of reduction. The entry simply reads “to reduce infrared, radar, or visual detection. As with the above, a “process” is technical data and/or a defense service and is controlled as such throughout all of the current and proposed USML categories. Enumerating it separately as such adds significant confusion to the USML itself. As noted above, we recommend the deletion of XIII(i) in its entirety.
- i. XIII(i)(8), multi-layer camouflage system techniques to reduce detection of platforms and equipment. Given the lack of definition and positive criteria, this entry could encompass everything from techniques associated with leading edge military stealth platforms to those associated with hunters using layers of camouflage in the woods to avoid detection by wild animals. As with the above, a “technique” is technical data and/or a defense service and is controlled as such throughout all of the current and proposed USML categories. Enumerating it

separately as such adds significant confusion to the USML itself. We recommend the deletion of XIII(i) in its entirety.

- j. XIII(i)(10) and (11), shaping techniques. There is no limitation that such techniques be unique to defense articles or other positive criteria to limit the scope to prevent unnecessary control of signature reductions for commercial purposes (e.g. Noise abatement). The entries as written also capture such techniques as reducing the electro-magnetic signature of an electrical power supply for the simple purpose of ensuring it does not interfere with other electrical components in close proximity. Another concern is with the reference to Low Probability of Intercept (LPI). This term is undefined. In conversations with the Department of Defense regarding a definition for it, their response has been that it is not exactly defined. As a result, the scope is vague and open to rather broad interpretation. As with the above, a “technique” is technical data and/or a defense service and is controlled as such throughout all of the current and proposed USML categories. Enumerating it separately as such adds significant confusion to the USML itself. We recommend the deletion of XIII(i) in its entirety.
5. XIII(j)(1), Laser eye-safe media including narrow band dyes/coatings and wide band non-linear optical material “specially designed” for goggles. The positive criteria for such laser eye-safe goggles are that they have narrow band or wide band non-linear coatings and an optical density greater than 3. As written, this entry captures every commercial laser safety goggle on the market today. For example, Thor Labs makes green, laser eye-safe goggles with an optical density of greater than 6 in the 0.2-0.4 μm and 0.9 -1.1 μm band widths that are undeniable commercial and do not merit control on the USML. The proposed change would move these commercial items to the ITAR. We recommend this entry be deleted as laser eye-safe media is not unique to the military and accordingly does not warrant control under the ITAR.
6. XIII(k), Tooling and Equipment. This entry should be deleted. Technical data related to the design, manufacture, production, etc. of the articles is controlled. Tooling and equipment that reveals such technical data would be controlled for that reason. Controlling all tooling and equipment that is “specially designed” will capture commercial tooling and equipment where the modification or other change making it “specially designed” is a purely commercial change unrelated to the unique military capabilities of the defense article that in no way reveal any technical data controlled under the subchapter.

As we stated earlier, these reforms are much needed to help the U.S. export control apparatus stay in step with the ever evolving and changing global markets and national security climates. Moving to a positive criteria list, based on the unique military capabilities of an end-item, will do much to remove unnecessary export license applications from the system and allow companies with truly commercial products to compete in the global market. We urge the Department to consider our comments in amending this proposed rule to ensure the changes produce a bright jurisdictional line, void of ambiguity and confusion to the maximum extent possible and to ensure truly unique military articles and technology remain controlled as such while eliminating such needless controls on the rest of the industrial base.

Should you have any questions in this matter or require additional information, please contact Mr. Greg Hill at (703) 412-0288, ghill@drs.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Heather C. Sears". The signature is fluid and cursive, with a large initial "H" and "S".

Heather C. Sears
Vice President, Trade & Security Compliance
& Associate Corporate Counsel
DRS Technologies, Inc.



July 2, 2012

Directorate of Defense Trade Controls
Office of Defense Trade Controls Policy
Department of State
VIA EMAIL: DDTCResponseTeam@state.gov

Re: Amendment to the International Traffic in Arms Regulations: Revision of U.S. Munitions List Category XIII (Federal Register Docket ID. 2012-12123, RIN 1400-AD13)

IPC — Association Connecting Electronics Industries welcomes the opportunity to comment on the proposed revision of United States Munitions List (“USML”) Category XIII as detailed by the Department of State’s Federal Register notice. As an organization with a long history of cooperation with and support of the agencies that develop and implement national security policy, IPC shares the Department of State’s concern that the proposed rule ensures appropriate USML coverage and fully protects U.S. national security.

In December 2011, IPC submitted extensive comments to the State Department in response to proposed revisions of USML Category VIII. In this submission, IPC recommended that the Directorate of Defense Trade Controls (“DDTC”) clarify in a final Category VIII rule the treatment of printed boards, ensuring that a printed board’s designs and digital instructions be subject to the USML when the end item for which the printed circuit board is designed is identified on the USML. In making its case, IPC provided a diverse selection of examples to illustrate the highly sensitive and important role of printed boards in military electronics.

The concerns and recommendations that IPC detailed in its December 2011 comments parallel those IPC has with regard to the Department of State’s Category XIII revisions. IPC believes it is important that the Category XIII rule – and similar USML/CCL rules developed in the future – ensure clear treatment of printed boards and their designs as the DDTC transitions certain parts, components, accessories, and attachments from the USML to the Commerce Control List (“CCL”). Specifically, the rules should make clear that the design instructions (known as “digital data” in the industry) for printed circuit boards will remain under International Traffic in Arms Regulation (“ITAR”) control when the end item for which the board was designed is included on the USML. This clarification would ensure appropriate USML coverage and protect national security by controlling important technical data about ITAR controlled items.

These comments provide a concise response to the State Department’s Category XIII revisions. IPC also intends to comment on any proposed rule that DDTC publishes regarding Category XI.

I. About IPC

IPC is a U.S.-headquartered global trade association, representing all facets of the electronic interconnect industry, including design, printed board manufacturing and printed board assembly. IPC has more than 3,000 member companies of which 1,900 members are located in the United States. IPC is the definitive authority on standards used by the global electronics industry and is the leading source for training, market research and public policy advocacy and other programs to meet the needs of an estimated \$1.7 trillion global electronics industry.

II. National security importance of printed circuit boards and designs

Specialized printed board and printed board assemblies are custom-made and uniquely designed for the specific function of the electronic items in which they are incorporated. Drawing upon very precise specifications for the design and placement of parts, a printed board contains a roadmap for the operation of that item. Manufacture of the printed board, then, requires access to and use of all of the board's design information. This access exposes a significant portion of the intellectual property for both the printed board and the item for which it is uniquely designed. Companies with access to the designs of printed boards for defense articles thereby also have access to sensitive information about controlled technologies.

Printed circuit boards and their designs, in fact, hold valuable and specific information about the workings of the underlying defense articles that make up USML Category XIII. Failure to properly secure the information embedded in printed boards that are custom-designed for defense articles could result in a breach of national security, theft of critical defense-related intellectual property and allow for reverse engineering of our critical defense systems.

III. Current Rule

Under the current ITAR, printed circuit boards designed for Category XIII are generally within the scope of the USML's controls on "components" that are specifically designed or modified for defense articles. Their printed board designs are also controlled by Category XIII(1) and/or Category XI (Military Electronics), because they reveal technical data regarding both the printed boards and the ultimate defense articles into which the printed boards are installed. IPC understands the treatment of printed boards under ITAR to be unequivocal, but the Association has longstanding concerns that current law is frequently misunderstood, leading to preventable ITAR violations. IPC maintains that greater clarity about the controls on printed boards is necessary to protect national security.

IV. Proposed Rule

Under the proposed rule, it is unclear whether printed boards would be transferred to the jurisdiction of the CCL. The proposed rule generally transfers to the CCL all components specifically designed for materials and miscellaneous articles, but as IPC noted in its Category VIII comments, printed boards may be considered as “technical data” related to the defense articles into which they are incorporated. IPC recommends that DDTC clarify the proper treatment of printed boards, to ensure that the industry understands the U.S. government’s position regarding the proper export control jurisdiction of these important products.

If printed boards themselves are retained on the USML as “technical data” in physical form, then printed board designs necessarily must be retained on the USML as well. They convey the same information, just in a different format. Even if DDTC determines that printed boards for defense articles are not subject to USML jurisdiction, however, DDTC should determine that printed board designs are subject to the USML as “technical data” as they convey technical data regarding the defense items into which printed boards are incorporated. Control of printed circuit board digital data and related designs, in short, should follow the categorization of the end item itself, whether or not the physical printed circuit board remains an ITAR controlled item.

V. Recommendation

Given confusion over the treatment of printed boards under ITAR, IPC contends that DDTC clarify the status of printed board designs in its final rule regarding Category XIII. For instance, DDTC could state the following in the Final Rule when it responds to public comments:

One commenter requested that DDTC confirm that the design and digital instructions for printed circuit boards specifically designed for materials and miscellaneous articles are “technical data” within the meaning of Category XIII(1). DDTC confirms that these designs and digital data fall within the standard definition of “technical data,” to the extent that they contain technical data directly relating to Category XIII items. Accordingly, such printed board designs and digital instructions are subject to the USML when the end item for which the printed circuit board is designed is identified in Category XIII.

IPC seeks similar clarification for printed boards in other USML categories, although IPC recognizes that there could be a number of additional ways to address this issue. DDTC may wish to amend the definition of “technical data” in 22 C.F.R. §120.10, to clarify this point. Another approach would be to address the issue clearly in Category XI (Military Electronics), to explicitly cover all printed board designs related to defense articles.

VI. Conclusion

IPC supports the State Department's goal of reforming the USML to clearly describe what items it covers. However, in order to prevent the unintentional release of detailed design information about these items, the State Department should clarify that printed circuit board designs remain under the jurisdiction of ITAR when the end item for which the board is designed is a USML item.

The issue of printed circuit board designs is not unique to the Category XIII. Every category of USML items includes the technical data directly related to those items.¹ These printed circuit board designs and digital data constitute technical data relating to the various end-items and USML components identified in each category because they contain information required for the design, development, manufacture, etc. of those defense articles.

Accordingly, IPC recommends that DDTC clarify the status of printed board designs in its final rule regarding Category XIII and has suggested one approach in Section V. Further, IPC recommends that DDTC consider the issue of printed circuit board designs in the context of its ongoing revision of the USML, through steps such as (1) clarifying the scope of technical data in each USML Category, noting that printed board design coverage follows the coverage of the end item itself, (2) amending the definition of "technical data" in 22 C.F.R. §120.10, to clarify this point across all categories, and (3) clarifying Category XI to refer expressly to printed board designs for defense articles.

Thank you again for the opportunity to comment on the proposed amendments to USML Category XIII. If IPC can offer additional information or assistance, please contact me at FernAbrams@ipc.org or 703-522-0225.

Sincerely,



Fern Abrams
Director of Government Relations

¹ See 22 C.F.R. § 121.1 Category I(i), II(k), III(e), IV(i), V(h), VI(g), VII(h), IX(e), X(e), XI(d), XII(f), XIII(l), XIV(m), XV(f), XVI(e), XVII(a), XVIII(f), XX(d), XXI(b).

PUBLIC SUBMISSION

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Comments Due: July 02, 2012

Docket: [DOS-2012-0036](#)

Amendment to the International Traffic in Arms Regulations: Revision of U.S. Munitions List Category XIII

Comment On: [DOS-2012-0036-0001](#)

Amendments to International Traffic in Arms Regulations: Revision of U.S. Munitions List Category XIII

Document: [DOS-2012-0036-0002](#)

Comment on DOS-2012-0036-0001

Submitter Information

Name: Edward Hee

Organization: Private citizen

Government Agency: None

General Comment

It is my opinion that the Dept. of State's assertions in paragraph titled 'Regulatory Analysis and Notes' on pg. 29577 of Fed. Reg. Vol. 77, No. 97 regarding exemption from § 553 (Rulemaking) and § 554(Adjudications) of the Administrative Procedure Act, as well as exemption from provisions of 5 USC 553 and certain Executive Orders, is based on an inaccurate interpretation of primary departmental responsibility for the materials to be governed under the proposed rule. Since all materials to be covered under the proposed rule are military in nature or have potential military applications, the Dept. of Defense, not State, should have primary oversight in declaring or requesting exemption from federal rulemaking guidelines. Also, since the proposed rule directly affects the import or export of various commercially produced materials that would cross state borders or international boundaries, the Dept. of Commerce must also be included in any proposed rulemaking change.

Based on statements included in the proposed rule relative to the addition of certain language and the co-ordination of language, terms, and definitions between two existing lists (the USML and the CCL) resulting in the increased likelihood of financial impact on businesses producing and shipping controlled materials, the assertion made by State in its impact analysis relative to the Small Business Regulatory Enforcement Act of 1996 and Exec. Ords. 12372 and 13132 is woefully inadequate. The potential for signifigant, protracted and expensive litigation against any manufacturer or shipper deemed to be non-compliant or have violated provisions of the Regulation could well impose unbearable costs on businesses for compliance, mitigation or

defense against legal action. Also, the likelihood of involvement of other federal agencies (e.g. Dept. of Transportation) in any investigative or prosecutorial actions for the aforementioned reasons could impose considerable additional costs not allowed for in P. R.



2 July 2012

Directorate of Defense Trade Controls
Attn: Category XIII Revision
Bureau of Political Military Affairs, U.S Department of State
Office of Defense Trade Controls Policy
PM/DDTC, SA-1, 12th Floor
Washington, D.C. 20522-0112

RE: Revision of U.S. Munitions List Category XIII (77 CFR 29575, May 18, 2012, Public Notice 7883)

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 policies and procedures that advance effective university compliance with applicable US export/import and trade sanctions regulations.

AUECO is specifically interested in contributing to the export control reform effort in order to ensure that the resulting regulations do not have a disproportionate impact on academic pursuits. As a result, AUECO is providing the following comments in response to the Department of State (DoS) proposal amending the International Traffic in Arms Regulations (ITAR) to revise Category XIII (Materials and Miscellaneous Articles) of the U.S. Munitions List (USML) to describe more precisely the Category XIII items and materials warranting control on the USML.

In the Federal Register notice, the DoS acknowledged that difficulties in interpreting the existing USML arise because the categories “are general and include design intent as an element of causing an item to be controlled.” AUECO would like to emphasize that in order to create a “positive list” with a “bright line” between what is controlled on the USML and what is controlled on the Commerce Control List (CCL), it is critical that each entry contain precise and specific terms as well as all relevant definitions for those terms. Steps should be taken to avoid ambiguous entries and to instead provide qualifying and clear descriptive whenever possible. It is equally important to ensure that the regulations do not have the unintended consequence of restricting early stage fundamental research in areas related to Category XIII. Such research provides critical information to Government decision-makers about those materials and technologies that may, with future research and development, benefit the US military. With these considerations in mind, AUECO carefully examined the proposed rule and is providing the following recommendations.

Renaming and Reorganization of Category XIII

AUECO would like to commend DDTC for making this Category more focused and specific by removing items more appropriately included in other USML Categories or Commerce Control List Export Control

Classification Numbers and for providing “bright line” performance thresholds for many of the articles. We also appreciate DDTC’s decision to identify those articles common to the Missile Technology Control Regime (MTCR) Annex and the USML with the parenthetical “(MT)”. That being said, there are a few areas in which the proposed rule falls short.

The first problematic issue is the lack of thresholds related to proposed section (b)(1-5). AUECO particularly recommends that DDTC clarify the meaning of “military cryptanalytic systems” in (b)(3) and add performance criteria if possible.

The next problematic issue is the definition of “ablative materials”. To prevent ambiguity, “ablative materials” needs to be better defined or the materials defined in subsection (d)(2) carbon/carbon billets provided with more positive characteristics. Carbon/carbon billets with three or more dimensional weaves may be created for purposes other than ablative material performance characteristics, yet the proposed rule would capture these materials on the USML as ablative materials. Currently, the USML limits controls on ablative materials only in applications in Category IV launch vehicles and MTCR Annex Category I reentry vehicles. Without further clarification, the proposed rule appears to expand items listed on the USML, not remove them.

The E_m and NIJ Level III performance thresholds for proposed sections (e)(2), (e)(3), (e)(6) and (e)(7) establish a bright line identifying those armors which warrant the more stringent controls afforded by the ITAR. What remains unclear is whether or not there is an affirmative responsibility to test new armor materials to the stated performance thresholds. Under the current armor classification guidelines university researchers, and others, can continue to work with experimental materials in an unrestricted manner unless and until they have been tested and shown to exceed stated performance thresholds and there is no affirmative responsibility to perform such tests. In order to further establish a “bright line” for these materials and to permit university fundamental research in this important area to continue, AUECO recommends that DDTC adopt and articulate a similar position with respect to the armor and armor materials identified in Category XIII.

If DDTC determines that affirmative responsibility to test armor materials is necessary, there are ancillary issues that must be addressed. Material researchers may not have the expertise or equipment needed to test such materials against stated performance thresholds. Also, with many material samples, it may be difficult and expensive to produce the material in a form that can be tested by outside testing agencies. The matters of affirmative responsibility and testing are so problematic that some researchers have indicated they would abandon research into these materials rather than be left in a liability situation by unknowingly creating ITAR-restricted armor materials, or faced with an affirmative testing responsibility.

Proposed sections (e)(4) and (5) provide size criteria (greater than ¼ inch-thick and larger than 8 inches x 8 inches) rather than a performance criteria for transparent and non-transparent ceramic plate or blanks, respectively. AUECO recommends that performance thresholds be identified for these sections or, alternatively, that the sections be limited to plates and blanks used in specific military applications. In addition, AUECO recommends that DDTC use total surface area rather than linear dimensions to describe the size threshold for plates and blanks. As currently written, a reasonable interpretation is that a plate exceeding eight inches in either dimension would be captured by these sections whether or not the total surface area was less than the 64 square inches. Making this change would provide greater clarity and flexibility for exporters.

Applicability of §121.1 Category XIII to the Products of Fundamental Research

AUECO is concerned about the applicability of §121.1 Category XIII (e)(1) to the products of US DoD funded fundamental research and recommends that language be added to differentiate between armor and armor materials. Our concern is that without a clear distinction between these terms that inclusion of armor materials in (e), particularly when the term is not used in any of the subparagraphs, will lead to overly broad interpretations. This is particularly critical in (e)(1) which deals with developmental armor developed under a DoD contract. As written, (e)(1) would subject the products of contracted fundamental research (i.e. conducted by a university under a subcontract from a company on a DoD prime contract) to regulation as a defense article even in the absence of any contractual restrictions on the dissemination of the research results. While it may seem unlikely that developmental armor or armor materials would be produced under a US Government funded fundamental research contract, it is possible that this could occur.

It is important to understand that fundamental research exploring the early stages of new materials is critical for the development of the next generation of armor materials and armors for use by US military. In order to support the discovery of these next generation materials, it is critical to protect the earliest stages of research from regulation. It is essential that any regulatory structure recognize that most new materials produced in fundamental research will be unlikely to have any military utility. Should new materials with military applications be identified in the future, they should be designated as an emerging technology (OY521) or directly added to the CCL or USML by publication of a new or revised ECCN or USML Category description in the Federal Register.

The Need for Harmonized Definitions

AUECO would like to once again recommend that the proposed harmonized definitions be released prior to the next Federal Register notice requesting comments on export reform. Use of the pertinent definitions is critical to the interpretation of the regulations, assessment of the likely impact of the proposed changes, and would greatly enhance the quality and relevance of public comments.

We would further ask that the export community be offered the opportunity to comment not only on the proposed definitions once released, but also be afforded the opportunity to provide comments on current regulations and previously closed proposed regulations when the proposed definition affects the interpretation and/or implementation of the rule.

The Need for Reciprocal Licensing Exemptions/Exceptions

As previously expressed in our comments submitted to the Bureau of Industry and Security on September 13, 2011, AUECO is concerned that in some instances transferring items to the Commerce Control List (CCL) could result in technologies being regulated in a more restrictive manner than if they were controlled under the ITAR. Under the ITAR, important general exemptions (e.g. 22 CFR §§ 125.4(b)(9), 125.4(b)(10) and 125.4(b)(7)) exist that can provide relief from licensing requirements; such exemptions are not currently available under the EAR.

AUECO strongly recommends that DDTC and BIS ensure that reciprocal exemptions or similar relief to licensing requirements be provided under the EAR. In the absence of reciprocal provisions under the EAR, moving items and technologies from the USML to the CCL will increase the licensing burden at academic institutions.

Closing

In closing, AUECO would like to express its appreciation for the opportunity to provide comments on these proposed changes. AUECO supports converting the USML into a “positive list”, and hopes that this step will reduce jurisdictional disputes and uncertainty for exporters.

AUECO strongly recommends that DDTC regulate new materials and articles through designation as an emerging technology (0Y521) or by directly adding the material to the CCL or USML by publication of a new or revised ECCN or USML Category in the Federal Register rather than by inclusion of “developmental” catchalls or the source of funding.

Additionally, as currently written, the proposed revisions fail to clearly differentiate between “armors” and “armor materials” which creates uncertainty regarding the regulatory scope. Absent clear definitions exporters may be forced to treat materials that do not appear to provide a critical, substantial or significant military advantage as being ITAR controlled.

AUECO is concerned that without a lack of reciprocal licensing exemptions under the EAR, moving items and technologies from the USML to the CCL may create an increased licensing burden for universities. Additionally, a lack of harmonized definitions makes assessing the impact of the proposed revisions to Category XIII problematic. Harmonized definitions for key terms such as “fundamental research”, “technology”, “public domain”, etc., are absolutely necessary to analyzing the proposed rewrite.

AUECO remains committed to contributing to the export control reform effort, and welcomes any request for further clarification of the comments above. Again, thank you for the opportunity to provide input on this very important topic.

Sincerely,



auecogroup@gmail.com

<http://aueco.org/>