



May 1, 2015

RESPONSE TO REQUEST FOR COMMENTS RE: USML CATEGORY VIII AND CCL CATEGORY 9

On March 2, 2015, the Department of State, Directorate of Defense Trade Controls (“DDTC”) and the Department of Commerce, Bureau of Industry & Security (“BIS”) issued Federal Register notices soliciting comments from industry on the implementation of Export Control Reform (“ECR”) with respect to military aircraft and military gas turbine engines and setting the deadline for such comments as May 1, 2015.¹

Aerospace and defense industry representatives, acting through the Aerospace Industries Association (“AIA”), respectfully submit the following comments. Thank you for your consideration. We hope that these comments will help DDTC and BIS continue to improve the U.S. export control system.

EXECUTIVE SUMMARY – IMPROVEMENTS TO CREATE A MORE “POSITIVE” USML

On December 10, 2010, DDTC notified the public of its intent to revise the U.S. Munitions List (“USML”) “to create a ‘positive list’ that describes controlled items using, to the extent possible, objective criteria rather than broad, open-ended, subjective, or design intent-based criteria.”² DDTC further stated that, “A ‘positive list’ is one that describes controlled items using objective criteria such as horsepower, microns, wavelength, speed, accuracy, hertz or other precise descriptions . . .”³ Three years later, on October 15, 2013, DDTC took great strides towards achieving this goal when it issued the first wave of ECR covering USML Categories VIII and XIX.⁴

Nevertheless, despite these efforts, USML Categories VIII and XIX still contain many entries that use “broad, open-ended, subjective, design intent-based” language that ECR was intended to address, and such terms are either not defined (*e.g.*, “military”), or they are defined to be so broad that they could potentially capture every item on the USML (*e.g.*, “mission system”).

¹ Notice of Inquiry; Request for Comments Regarding Review of United States Munitions List Categories VIII and XIX, 80 Fed. Reg. 11314 (DDTC); Notice of Inquiry: Request for Comments Regarding Controls on Military Aircraft and Military Gas Turbine Engines on the Commerce Control List, 80 Fed. Reg. 11315 (BIS).

² Advanced Notice of Proposed Rulemaking, Revisions to the United States Munitions List, 75 Fed. Reg. 76935 (Dec. 10, 2015) available at <http://www.pmdtc.state.gov/FR/2010/75FR76935.pdf>.

³ *Id.*

⁴ Final Rule, Amendment to the International Traffic in Arms Regulations; Initial Implementation of Export Control Reform, 78 Fed. Reg. 22740 (Oct. 15, 2013) available at <https://www.pmdtc.state.gov/FR/2013/78FR22740.pdf>.

AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9 May 1, 2015

These entries create uncertainty for industry, and they work together to negate many of the intended benefits of ECR with respect to aircraft.

For example, although BIS created ECCN 9A610.a to control “‘military aircraft’ ‘specially designed’ for a military use that are not enumerated in USML paragraph VIII(a),” and ECCN 9A012 to cover “non-military ‘unmanned’ aerial vehicles” (“UAV”), these ECCNs are nearly empty categories. This is because almost every aircraft that could fall into either of these entries is pulled back onto the USML for one or more of the following reasons:

- “Military” and “non-military” are not defined, and industry has no objective criteria to determine whether a UAV falls under USML Category VIII(a)(5) or ECCN 9A012;
- All Optionally Piloted Vehicles (“OPV”), ones that can fly with or without a human pilot, fall under USML Category VIII(a)(13) regardless of the classification of the aircraft that is converted into an OPV and regardless of the aircraft’s capabilities;
- The aircraft contains one or more “mission systems” that cause it to fall under USML Category VIII(a)(11);⁵ or
- The aircraft flies “intelligence, surveillance, and reconnaissance” (“ISR”) missions, and the lack of a definition for “military” necessitates classification under USML Category VIII(a)(7).

Even in the rare cases in which an Original Equipment Manufacturer (“OEM”) exports an aircraft under ECCN 9A610.a, the customer generally transforms the aircraft into an ITAR-controlled defense article immediately after receipt by incorporating a “mission system.” This creates havoc for companies trying to comply with export license requirements to ship aircraft to our customers overseas, while also providing after-market maintenance, repair and overhaul (“MRO”) services in line with the applicable export laws.

The comments below seek to address these issues by proposing practical solutions to create certainty for industry while enabling the U.S. government to continue to control the products and technologies that U.S. government officials have determined warrant such control. We would like to clarify that these comments do not recommend that DDTC “de-control” anything; rather, we respectfully request that DDTC and BIS continue to improve the USML and the Commerce Control List (“CCL”) to create more “positive” lists based on clearly-defined, objective criteria.

To this end, these comments comprise three parts:

- **PART 1** – DDTC and BIS should create objective criteria to define which UAVs and OPVs fall on the USML in Categories VIII(a)(5) and VIII(a)(13), respectively, and which

⁵ As explained in Part 2, Section V, the Note at the end of USML Category VIII does not solve this issue, and in fact, it hinders industry’s ability to sell spare and replacement parts, or provide warranty and maintenance services, along with our aircraft.

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

fall on the CCL in ECCN 9A012; the terms “military” and “non-military” are broad, subjective, and design intent-based, and, therefore, contrary to ECR.

- **PART 2** – DDTC should remove Category VIII(a)(11) from the USML because “mission systems” are controlled adequately elsewhere on the USML, and VIII(a)(11) creates an unnecessary burden for industry.
- **PART 3** – DDTC should exclude EAR-controlled aircraft from USML Category VIII(a)(7) and control the defense articles that provide ISR capabilities in the USML entries into which these items fall.

We appreciate DDTC’s and BIS’s consideration of these issues, and we look forward to discussing them with you further.

Thank you

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

PART 1 – DDTC AND BIS SHOULD CREATE OBJECTIVE CRITERIA TO DEFINE WHICH UAVS AND OPVs FALL ON THE USML AND WHICH FALL ON THE CCL; THE TERMS “MILITARY” AND “NON-MILITARY” ARE BROAD, SUBJECTIVE, AND DESIGN-INTENT-BASED, AND, THEREFORE, CONTRARY TO ECR.

I. DDTC and BIS Should Define Objective Criteria Regarding Which UAVs Fall on the USML and Which Fall on the CCL

USML Category VIII(a)(5) controls “unarmed military unmanned aerial vehicles,” and ECCN 9A012 controls “non-military ‘unmanned aerial vehicles.’” (Emphasis added.) However, neither the ITAR nor the EAR define the terms “military” or “non-military.” Therefore, a company that wishes to market an unarmed UAV system to (1) U.S. and foreign armed forces, and (2) commercial customers, as many companies do, has no objective criteria to determine whether the UAV system falls under the ITAR or the EAR and whether the company should apply for a license from DDTC or BIS. This uncertainty causes confusion, wastes time, and prevents industry from securing potential business opportunities.

Based on the order of review and the fact that the ITAR trumps the EAR, absent a CJ determination stating otherwise, a company would almost always have to classify a UAV system with potential military application under USML Category VIII(a)(5), rendering ECCN 9A012 a virtual empty set. Moreover, even if the company wanted to apply for a CJ determination to move an unarmed UAV system from the ITAR to the EAR, it is not clear what characteristics and capabilities one would discuss in the CJ application because the factors that DDTC would use to consider the CJ request are unknown. (At present all we could say is that a UAV is not a “military” UAV because we do not think it is a “military” UAV. This type of a circular, conclusory argument is unlikely to persuade the U.S. government.)

However, it would be counter to the stated principles of ECR to determine that an unarmed UAV system is “military” under USML Category VIII(a)(5) simply because it was initially designed for use by armed forces, or if the U.S. military was the first to operate the system. Rather, industry respectfully requests that DDTC and BIS create objective criteria to define which UAVs are controlled on the USML and which on the CCL. The criteria for classifying UAV systems should focus on the capabilities of the UAV platform (*i.e.*, payload and range) rather than on what the UAV system can carry (*e.g.*, the resolution of ISR sensors). This is because, as discussed further below in Parts 2 and 3, the ISR sensors, military navigation and communications equipment, and other defense articles that an aircraft, manned or unmanned, can carry are already controlled adequately in other Categories of the USML and CCL. As explained below it is not necessary to create a secondary ITAR category to capture EAR aircraft, manned or unmanned, that carry such items.

AIA understands that BIS’s Transportation and Related Equipment Technical Advisory Committee (“TransTac”) has created an Unmanned Aerial System Technical Working Group to examine what technologies unique to UAV systems may warrant ITAR control, and we look forward to their findings.

II. DDTC and BIS Should Apply the Same Objective Criteria Discussed Above to Optionally-Piloted Vehicles and Revise USML Category VIII(a)(13) Accordingly

USML Category VIII(a)(13) controls all “Optionally Piloted Vehicles (OPV) (i.e., aircraft specially designed to operate with and without a pilot physically located in the aircraft).” We see no reason to control OPVs differently from UAVs, and the same factors that cause a UAV to be controlled on the USML vs. the CCL should apply equally to OPVs.

Although OPVs currently fall under the ITAR, the technology required to “develop,” “produce,” and/or “use” a “non-military” UAV already falls under the EAR.⁶ In other words, the technology required to make an aircraft fly without a pilot is not ITAR-controlled; one could do it using EAR-controlled technology.

Nevertheless, if a company were to convert an ECCN 9A991.b general aviation airplane into an OPV and have a seat for a pilot to take the controls, the aircraft would fall under the ITAR as a USML Category VIII(a)(13) defense article; however, if the company removed the pilot’s seat to create a UAV, the aircraft would fall under the EAR as an ECCN 9A012 non-military UAV.

This creates an odd situation, and we would request that DDTC and BIS address this by using the same objective criteria discussed above with respect to UAVs to determine which OPVs fall on the ITAR and which on the EAR. We do not see a reason to control OPVs at a higher level of control than UAVs with similar payload and range just because an OPV could be piloted by a human.

III. In Addition to Clarifying Which UAVs/OPVs Fall on the USML and CCL, DDTC Could Add Sub-Paragraphs to Certain Entries in Category VIII(a) to Include “Unmanned and Optionally-Piloted Variants Thereof.”

In addition to adding objective criteria to clarify which UAVs and OPVs fall on the USML vs. the CCL, DDTC could simply eliminate USML entries VIII(a)(5) and VIII(a)(13) and instead add sub-categories to other sections of USML Category VIII(a) to include unmanned and optionally-piloted variants of certain aircraft. For example, to cover unmanned and optionally-piloted bombers and fighters, DDTC could add new USML sub-paragraphs to USML Category VIII(a) and VIII(b), as follows:

Category VIII – Aircraft and Related Articles

(a) Aircraft as follows:

* (1) Bombers;

(a) Manned;

⁶ See ECCN 9E001, ECCN 9E101, and ECCN 9E102.

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

(b) Unmanned or optionally-piloted variants (MT if the aircraft has a range equal to or greater than 300 km)

* (2) Fighters, fighter bombers, and fixed-wing attack aircraft;

(a) Manned;

(b) Unmanned or optionally-piloted variants (MT if the aircraft has a range equal to or greater than 300 km)

This would allow DDTC to control unmanned aircraft that have specific military functions in the USML Categories that already cover the specific military functions that DDTC would like to control.

We do not, however, recommend that DDTC add such a sub-paragraph to USML Category VIII(a)(7), which covers “military [ISR] aircraft” because “military” is not defined, and this entry does not explain what specific ISR capabilities DDTC wishes to control. Rather, for reasons discussed below in Part 3, we recommend that DDTC enumerate the specific military ISR aircraft that fall under USML Category VIII(a)(7) and exclude from this entry EAR-controlled aircraft that perform ISR roles. We also recommend that DDTC control ISR defense articles used on EAR platforms in the USML Categories into which the ISR defense articles fall, *e.g.*, USML Categories XI and XII. Otherwise USML Category VIII(a)(7) would render ECCN 9A610.a and 9A012 virtual empty categories because a large number of aircraft that would fall under these CCL entries often perform ISR missions for U.S. and foreign militaries and could, therefore, be pulled back onto the USML.

IV. DDTC and BIS Should Clarify What Specific Factors Make Certain UAV Launching, Recover, and Landing Systems ITAR-Controlled, and When such Systems Fall under ECCN 9A610.u

Although certain UAVs take off and land like manned aircraft, other variants use launching, recovery, and landing systems, especially in environments where a traditional runway is not an option.⁷ However, these systems have valid dual-use applications, and they are not uniquely military.

The USML and CCL currently contain multiple overlapping entries into which the same UAV launching, recover, and landing system could fall, and it is not clear why some are ITAR-controlled and others EAR-controlled:

- USML Category VI(f)(6) controls “catapults for launching aircraft”;

⁷ See, *e.g.*, Tactical Automatic Landing System <http://sncorp.com/Pdfs/BusinessAreas/TALS%20Product%20Sheet.pdf>; see also, Aerosonde Mark 4.7 - <http://www.aerosonde.com/pdfs/aerosonde-mark-47.pdf>.

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

- USML Category VIII(d) controls “ship-based launching and recovery equipment . . . and land-based variants thereof”;
- USML Category VIII(h)(6) controls UAV “airborne launching systems”; and
- ECCN 9A610.u controls “Apparatus and devices ‘specially designed’ for the . . . non-ship-based launching of UAVs or drones.”

Industry respectfully requests that DDTC and BIS clarify that all UAV launching, recovery, and landing systems fall under ECCN 9A610.u (or another CCL category) or clarify when to use ECCN 9A610.u and when to use the various USML Categories identified above.

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

**PART 2 – DDTC SHOULD REMOVE CATEGORY VIII(A)(11) FROM THE USML BECAUSE
“MISSION SYSTEMS” ARE CONTROLLED ADEQUATELY ELSEWHERE ON THE USML, AND
VIII(A)(11) CREATES A SIGNIFICANT BURDEN FOR INDUSTRY.**

**I. USML Category VIII(a)(11) Is Not Necessary Because “Mission Systems” Are
Already Controlled Adequately Elsewhere on the USML**

In addition to the subparagraphs of USML Category VIII(a) that control aircraft due to their inherent capabilities (such as fighters and bombers), USML Category VIII(a)(11) controls aircraft that are otherwise subject to the EAR, but which “incorporat[e] any mission system controlled under [the ITAR].”⁸

Note 1 to VIII(a)(11) defines “mission systems” as “systems” that are “defense articles that perform specific military functions such as by providing military communication, electronic warfare, target designation, surveillance, target detection, or sensor capabilities.” (Emphasis added.)⁹ By definition, therefore, a “mission system,” is a defense article that is controlled already somewhere else on the USML.

For example, an AN/ARC-210 Talon Programmable Digital Communication System (“AN/ARC”) is a “mission system” because it is a “system” that falls under USML Category XI(a)(5).¹⁰ At times our businesses (and our customers) incorporate AN/ARC systems into aircraft that we manufacture which are otherwise subject to the EAR. We respectfully submit that it is not necessary to control the ECCN 9A991.b aircraft that incorporate AN/ARC systems under USML Category VIII(a)(11) because DDTC already controls the AN/ARC system in USML Category XI.

This issue is further complicated by the fact that the definition of “mission system” uses the broad, open-ended phrase “such as,” *i.e.*, “defense articles that perform specific military functions such as . . .” This means that any defense article can be a “mission system” if (1) it is a “system,” *i.e.*, has more than one part, and (2) it performs any “specific military function.”

Because every defense article could be assumed to perform a “specific military function” otherwise it should not be on the USML, if a defense article comprises two or more parts, which is almost always the case, it would be a “mission system” as this term is currently defined. However, this cannot have been DDTC’s intent, otherwise there would not have been a need to

⁸ We recognize that similar language exists in USML Categories VI(a)(4), VII(c), and XX(a)(7) with respect to vessels, ground vehicles and trailers, and submersibles, respectively. We respectfully submit that the same arguments discussed herein apply equally to the other categories that involve “mission systems;” however, since DDTC and BIS have only requested comments on USML Category VIII and CCL Category 9, we have limited our comments to aircraft and aircraft parts.

⁹ A “system” is “a combination of parts, components, accessories, attachments, firmware, software, equipment, or end-items that operate together to perform a function.” 22 C.F.R. § 120.45(g).

¹⁰ An overview of the AN/ARC system is available at https://www.rockwellcollins.com/Data/Products/Communications_and_Networks/Communication_Radios/AN-ARC-210_Talon_Programmable_Digital_Communication_System.aspx

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

define “mission system,” and DDTC could have drafted USML Category VIII(a)(11) to control simply “Aircraft incorporating any defense article controlled under this subchapter,” rather than “Aircraft incorporating any mission system controlled under this subchapter.” This language leads to significant confusion among companies trying to comply with USML Category VIII.

For these reasons and the reasons discussed in detail below, we respectfully submit that it is not necessary to have a USML entry that controls EAR aircraft that contain “mission systems” when USML entries for the “mission systems” already exist. DDTC’s long-standing “see through” rule dictates that an ITAR authorization is required to export, re-export, or transfer an aircraft that incorporates a “mission system,” such as an AN/ARC system, and as discussed in the next section, a process to obtain the necessary export authorizations already exists. In other words, the requirement to obtain an export license to ship a USML Category XI AN/ARC system does not go away if we incorporate the AN/ARC into an ECCN 9A991.b aircraft, and so there is no reason to create a separate USML entry for the aircraft.¹¹

Therefore, USML Category VIII(a)(11) is unnecessarily redundant. It controls aircraft that incorporate defense articles which are already controlled on the USML via the “see through” rule. This type of secondary control does not enhance U.S. national security, but it does create significant burdens for industry with respect to licensing, Congressional Notification value thresholds, and how to determine what services provided in connection with the aircraft constitute “defense services,” as discussed further below.

II. DDTC and BIS Already Have a Process to License EAR-Controlled Aircraft that Incorporate ITAR-Controlled Items

USML Category VIII(a)(11) is not necessary, because the U.S. government already has a process to license EAR-controlled aircraft that incorporate ITAR-controlled components: (1) obtain a license from BIS to export the aircraft, if needed; and (2) obtain a license from DDTC to export the components on the aircraft that are ITAR-controlled. Although this process requires two export licenses from two different U.S. government agencies, as discussed in the sections that follow, this two-license process is actually easier for industry to manage than one license under USML Category VIII(a)(11).

In 2014, an aircraft OEM obtained an EAR license to export EAR-controlled military trainer aircraft to a country in Oceania. These aircraft are propeller-driven trainer aircraft that do not fall under any of the subparagraphs of USML Category VIII(a).¹² The OEM also obtained a DSP-5 to export certain USML Category X and XI defense articles along with the aircraft.

¹¹ It is also confusing that the ITAR do not designate USML Cat. VIII(a)(11) as Significant Military Equipment (“SME”) when many of the “mission systems” that cause an aircraft to fall under this USML Category are SME. To the extent that DDTC retains USML Cat. VIII(a)(11), which we do not recommend, we would ask DDTC to clarify this issue and explain whether industry should obtain DSP-83s for VIII(a)(11) aircraft that incorporate SME “mission systems.”

¹² In 2014, DDTC confirmed that the aircraft are EAR-controlled via CJ Determination.

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

This case provides an example of how DDTC effectively controlled ITAR-controlled defense articles used on EAR aircraft without using USML Category VIII(a)(11): The OEM applied for a DSP-5 export license to export the USML Category X and XI defense articles; DDTC reviewed the license request, staffed it to the U.S. export community, and considered the agency's export policy for such items to the country in question; and, after consulting with the staffing agencies, DDTC approved the DSP-5. It was not necessary to have a secondary USML Category, such as VIII(a)(11) to control the aircraft that incorporated the ITAR defense articles.

If DDTC, or another U.S. government agency, did not want the OEM to export the defense articles with the EAR-controlled aircraft, DDTC could have denied the DSP-5 license for such defense articles. All the relevant agencies in the export community had the opportunity to review and comment on the license application through the normal staffing process, providing full visibility as to the ITAR equipment incorporated into the EAR-controlled aircraft that the OEM sought to export to its foreign customer.

Additionally, another OEM recently won a contract to export helicopters outfitted with crew seat armor and cockpit floor armor to a country in Asia. The helicopters fall under ECCN 9A991.b, and so no export license from BIS is required for the sale, but DDTC issued a DSP-5 in early February 2015 to cover USML Category XIII(e)(5) armor installed on the aircraft. This provides another example in which DDTC considered and licensed ITAR-controlled items on an EAR aircraft without using VIII(a)(11).

These examples show that DDTC and BIS have adequate means to control the export of EAR-controlled aircraft that contain USML defense articles, and they provide further evidence that USML Category VIII(a)(11) is unnecessary.

III. USML Category VIII(a)(11) Leads to Inefficient Staffing and Unnecessary Congressional Notification Requirements

USML Category VIII(a)(11) should be repealed because it leads to inefficient staffing and an overinflated value that causes unnecessary notifications to Congress, which in turn causes costly delays to industry in obtaining export licenses necessary to conduct our business.

First, when a company applies for an export license, we understand that the license is assigned to a Licensing Officer in the Office of Defense Trade Controls Licensing ("DTCL") based on the USML Category(ies) that the application covers. We understand that USML Category VIII(a)(11) licenses are directed to Division V, which governs licensing for USML Category VIII defense articles. However, because the "mission systems" that cause aircraft to fall under USML Category VIII(a)(11) more often than not fall under a different USML Category, *e.g.*, Categories XI and XII, frequently Division V is not the appropriate group within DTCL to

AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9 May 1, 2015

review the application.¹³ Rather, it would be more efficient to staff the cases to the DTCL Division that handles the USML Category(ies) that govern the mission system(s).

Second, DDTC stated in the FAQs section of the agency's website and in response to a recent general correspondence request issued to one OEM that the Congressional Notification value for license applications involving USML Category VIII(a)(11) defense articles should be the value of the entire aircraft, rather than the value of the mission systems that cause the EAR-controlled aircraft to fall under the ITAR.¹⁴

For example, an OEM recently applied for a DSP-5 license to export ECCN 9A991.b helicopters to a foreign military in Asia. Although the helicopters are subject to the EAR under ECCN 9A991.b, some of the aircraft will include USML Category XI defense articles that qualify as "mission systems." The total value of the helicopters with the USML equipment installed exceeds the applicable Congressional Notification threshold of \$50 million; however, the total value of all of the USML articles on the aircraft is less than \$3 million, which is \$47 million below the Congressional Notification threshold.

Nevertheless, the Office of Defense Trade Control Policy ("DTCP") informed the OEM via telephone that Congressional Notification is required for this license. As DDTC is aware, Congressional Notification adds a significant amount of time to the licensing process, and in this case it has affected the OEM's ability to deliver to its customer on time.¹⁵

We understand that Congressional Notification is mandated by the Arms Export Control Act ("AECA") and is, for purposes of this discussion, based on contract value;¹⁶ however, we respectfully submit that DDTC has the authority to include only the value of the actual defense

¹³ This issue will continue to exist after DTCL reorganizes on April 20, 2015. In fact, DDTC's notice on this change states that, "D-Trade will be configured to automatically route cases to the proper division based on the USML commodities on the application." However, unless USML Category VIII(a)(11) is repealed, D-Trade will automatically route cases to the improper division, *i.e.*, the Sea, Land, and Air Systems Division tasked with USML Category VIII rather than the Divisions that handle most mission systems: the Space, Missile, and Sensor Systems Division or the Electronic and Training Systems Division. See <https://www.pmdtc.state.gov/documents/Industry%20Notice%20-%20Reorg%208%20Apr%202015v2.pdf>

¹⁴ DDTC FAQs available at <https://www.pmdtc.state.gov/faqs/ecr.html#o>. Responding to a question on how to account for USML Category VIII(a)(11) on a DSP-73, DDTC instructed industry to "Classify the aircraft as the following: 'Civil model aircraft equipped with [fill in name(s) of specific USML mission system(s)].' The value for that line must reflect the value for the entire aircraft, to include those mission systems(s) that are responsible for converting the aircraft to Category VIII(a)(11)."

¹⁵ In practice, Congressional Notification can add more than six months to license processing time. One might say that industry should just plan accordingly and apply for licenses further in advance. However, we cannot apply for such licenses until the proper contract documents are in place, and the timing creates significant difficulties for international business when we are competing with foreign OEMs that are not subject to the ITAR. We would appreciate it if DDTC would limit Congressional Notification to the cases that truly warrant it.

Furthermore, we understand that it is DDTC policy to only notify cases when both Houses of Congress are in session. This creates additional delays during congressional recesses, especially during election years when Congress often adjourns for long stretches at a time.

¹⁶ See 22 U.S.C. § 2776(c) implemented at 22 C.F.R. § 123.15.

AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9 May 1, 2015

articles when calculating contract value for purposes of Congressional Notification. Artificially inflating this number by including the value of the EAR-controlled aircraft onto which the defense articles are installed leads to unnecessary Congressional Notifications that in no way advance U.S. national security or foreign policy objectives.¹⁷

IV. DDTC Should Maintain Its Long-Standing Policy that Only Services Directly Related to a Defense Article Are “Defense Services”

In addition to the inefficient staffing and unnecessary notifications to Congress discussed above, in a Client Alert dated December 8, 2014, former DDTC official Christopher Stagg highlights an issue related to USML Category VIII(a)(11) and “defense services” that could wreak havoc for industry.¹⁸ According to Mr. Stagg, a DDTC official recently stated at a training conference in the context of “significant [advisory opinion] decisions likely to be incorporated into upcoming rules,” that, “Services rendered on an aircraft that incorporates a mission system constitute a defense service regardless of the system.”¹⁹

As an example, Mr. Stagg writes that, if this policy were to become official, “[S]ervices provided to the civilian Boeing 787 aircraft would be considered a defense service by DDTC if the Boeing 787 aircraft incorporates a mission system (a defense article) – even if the services do not involve the incorporated mission system. This means that aircraft maintenance providers would need a technical assistance agreement from DDTC to repair a common part or component, such as a tire on a Boeing 787 aircraft, merely because the aircraft incorporates a mission system.”²⁰

This issue has the potential to dwarf the concerns expressed in the sections above. If implemented into law, not only would this contradict the AECA, the ITAR, and long-standing DDTC policy, as Mr. Stagg explains in his Client Alert, but it would also impose untenable costs on industry, significantly increase DDTC’s licensing case load without enhancing U.S. national security or foreign policy objectives, and potentially jeopardize flight safety by deterring customers from obtaining routine maintenance.

DDTC can avoid these issues by: (1) repealing VIII(a)(11) in its entirety as discussed above; (2) clarifying that only services directly related to the “mission system(s)” of an VIII(a)(11) aircraft are “defense services, and that organizational-level maintenance needed to install or un-install a line-replaceable unit (“LRU”) onto an EAR-controlled aircraft is not a “defense service”; and/or (3) release services that are common to ITAR- and EAR-controlled aircraft from the ITAR,

¹⁷ Besides repealing USML Category VIII(a)(11), DDTC could also add a note to the ITAR that for Congressional Notification purposes, only the value of the ITAR mission system and/or defense articles incorporated into the aircraft are reportable, while the value of the civil aircraft platform and any other EAR items is excluded from the reportable value.

¹⁸ Christopher B. Stagg, Esq., “DDTC Issues Overly Expansive Interpretation of the ITAR for Defense Services (and Presumably Technical Data) available at <http://www.staggpc.com/insights/article-ddtc-issues-overly-expansive-interpretation-itar-defense-services.html>.

¹⁹ Stagg at 2 (quoting unnamed DDTC official talking about a Power Point slide during the Practising Law Institute’s Coping with U.S. Export Controls and Economic Sanctions program (Dec. 11-12, 2014)).

²⁰ Stagg at 2.

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

similar to the way that 22 C.F.R. § 120.41(b)(3) releases certain items and software from the definition of “specially designed.”²¹ The following sections discuss these issues and possible solutions.

A. Long-Established DDTC Policy Is that Only Services Directly Related to a Defense Article Are “Defense Services;” Arguments to the Contrary May Violate the AECA; and the AECA Does Not Require a Different Interpretation

Many in industry operate with the understanding that only services “directly related” to a defense article are controlled under the ITAR as “defense services,” and activities that are common to (1) an EAR-controlled aircraft that incorporates a defense article, and (2) an EAR-controlled aircraft that does NOT incorporate any such articles, such as changing a tire, are not “defense services.”²² This is largely due to the fact that such services do not require any ITAR-controlled technical data nor do they otherwise meet the definition of “defense services” in 22 C.F.R. § 120.9. In fact, USML Category VIII(i), the entry of Category VIII that addresses defense services, controls “defense services” which are “directly related to the defense articles described in paragraphs (a) through (h) of this category . . .” 22 C.F.R. § 121.1 (emphasis added).

Mr. Stagg explains the history of DDTC’s long-standing policy on this issue in his Client Alert, and he states on page 4 that DDTC confirmed this policy as recently as the Final Rule implementing ECR issued on April 16, 2013 where, in response to comments from industry regarding the “defense service” provision of USML Category XIX, DDTC stated as follows:

Two commenting parties recommended revising USML Category XIX(g) to control only technical data and defense services directly related to the “military functionality” of a defense article, for otherwise data and services common to commercial engines would be captured. The Department believes the ITAR definitions for “technical data” and “defense service” would preclude this occurrence, and therefore did not accept these recommendations.²³

However, as discussed above, DDTC recently called this long-standing policy into question when a DDTC official stated at a training conference that, “Services rendered on an aircraft that

²¹ This issue could also arise with respect to other entries in USML Category VIII(a) besides USML Category VIII(a)(11). For example, one OEM received a CJ determination in 2014 ruling that a turboprop military trainer aircraft that otherwise falls under the EAR is an “attack aircraft” under USML Category VIII(a)(2) because it has pylons controlled by USML Category VIII(h)(6). Saying that services provided to parts of the aircraft besides the pylons are “defense services” would not make any sense for the reasons discussed herein. As discussed in Part 3 below, a similar issue would arise if DDTC were to argue that an EAR-controlled aircraft that incorporates an ITAR-controlled EO/IR sensor package is a “military intelligence, surveillance, and reconnaissance aircraft” under USML Category VIII(a)(7). In that case, only services “directly related” to the ITAR EO/IR sensors should be “defense articles.”

²² AIA understands that certain other companies obtain authorizations from DDTC before performing any services on an ITAR-controlled aircraft, regardless of whether the service is identical to one performed on a non-ITAR-controlled aircraft.

²³ Stagg at 4 (citing Amendment to the International Traffic in Arms Regulations: Initial Implementation of Export Control Reform, 78 Fed. Reg. 22740, 22744 (Apr. 16, 2013) available at <https://www.pmdtc.state.gov/FR/2013/78FR22740.pdf>.)

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

incorporate a mission system constitute a defense service regardless of the system.”²⁴ Mr. Stagg explains in his article why DDTC does not have the legal authority to take such a stance under the AECA, and we believe that these arguments have merit.

Nevertheless, DDTC does not need to agree with Mr. Stagg to provide the relief discussed herein. This is because even if Mr. Stagg is wrong and DDTC does have the ability to define “defense services” in this manner, the AECA certainly does not require DDTC to interpret “defense services” to include activities that are not directly related to a defense article. Rather, the AECA defers to DDTC to define “defense service,” and DDTC can maintain the policy that has existed for more than 35 years that only services “directly related” to a defense article are “defense services.”²⁵

B. Determining that a Service for an Aircraft Can Be a “Defense Service” Regardless of the System to which the Service Pertains Will Impose Untenable Costs on Industry, Increase DDTC’s Case Load, and Potentially Jeopardize Flight Safety

If DDTC decides to redefine “defense services” to include services that are NOT directly related to a defense article, any person who provides any service to an aircraft that incorporates a “mission system” for a non-U.S. customer or anywhere outside of the United States would need to first obtain an export authorization from DDTC. For example, a DSP-5, Technical Assistance Agreement (“TAA”), or General Correspondence (“GC”) approval might be required to fill a gas tank, change a tire, or wash a window.²⁶

This is simply not reasonable as it would impose untenable costs on industry, significantly increase DDTC’s licensing case load without enhancing U.S. national security or foreign policy objectives, and potentially jeopardize flight safety by deterring customers from obtaining routine maintenance.

1. Creating an Export Compliance System to Track All Aircraft that Have Mission Systems and Obtain DDTC Approval Prior to Providing Any Service to the Aircraft Would Impose Significant Costs on Industry

As stated above, if “services rendered on an aircraft that incorporates a mission system constitute a defense service regardless of the system,” industry would need to obtain export authorizations from DDTC prior to servicing any such aircraft. To obtain the necessary authorizations, industry would need to identify and track every aircraft that contains a mission system, know when a customer plans to visit a facility for service, and apply for the necessary authorizations a few months in advance.

²⁴ Stagg at 2.

²⁵ Id. at 2 (noting that the AECA does not define “defense service,”); id. at 5 (discussing *U.S. v. Edler*, 579 F. 2d 516 (9th cir. 1978) and *Karn v. Department of State*, 925 F. Supp. 1 (D.D.C. 1996).

²⁶ See 22 C.F.R. § 124.1; see also, DDTC’s Guidelines for Preparing Electronic Agreements (Revision 4.2) (“DDTC’s Agreement Guidelines”) at §2.1 (“In exceptional cases, DTCL will consider the provision of limited defense services under DSP-5 license in accordance with §124.1(a).”)

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

This might be manageable (1) if we just started selling aircraft today and did not have decades of past sales, (2) if customers who bought EAR-controlled aircraft were not allowed to add mission systems to their aircraft after purchase without our knowledge and approval, (3) if customers who bought EAR-controlled aircraft were always willing to tell us what mission systems they installed on the aircraft after purchase, especially foreign governments, and (4) if customers were only allowed to bring their aircraft to one of the OEM's facilities for servicing. However, none of these constraints applies, and thousands of aircraft are flying around the world with ITAR mission systems, many of which did not have the systems when the airplanes left our manufacturing facilities.

Moreover, while certain mission systems require specialized skill sets and significant modifications to an aircraft's airframe, many can be installed using basic aircraft engineering know-how common to ITAR and non-ITAR systems, and a plane may land at a service facility for routine maintenance with an ITAR-controlled mission system that a customer added to the aircraft after it was originally sold. We have thousands of aircraft in our fleets, some of which were sold decades ago. Identifying and tracking which aircraft contain which mission systems would require collecting information from customers sometimes years after an initial sale and tracking aircraft at the tail-number level, which our IT systems generally are not configured to do.

For example, imagine that Customer One owns a Model A aircraft, Tail Number N1234, that is EAR-controlled under ECCN 9A991, and it does not contain any mission systems. An MRO facility located overseas could service anything on the aircraft without a TAA. However, if Customer Two owns a Model A aircraft, Tail Number N5678, that incorporates a mission system, the MRO facility would need to obtain a TAA to provide the same services to Customer Two that it can provide to Customer One without a TAA, even though the services have nothing to do with the mission system. This would be nearly impossible to administer, and it would require a significant investment in IT systems and personnel, with no additional benefit to U.S. national security or foreign policy objectives.

2. Requiring Industry to Obtain DDTC Approval Prior to Providing Any Service to an Aircraft that Contains a Mission System Would Overwhelm DDTC's (and DoD's) Case Load without Protecting National Security

While it is difficult to estimate how many new export applications DDTC would receive if it were to formalize the policy change on "defense services" discussed above, we anticipate that the increase would be staggering.²⁷ This is further compounded by the fact that one airplane

²⁷ We respectfully submit that the U.S. government would need to increase its resources to manage such an increase in licensing work because even without such a change in policy the average time needed to review and approve an ITAR application has increased significantly since ECR began.

According to metrics available on DDTC's website at <https://www.pmdtcc.state.gov/metrics/index.html>, the average number of applications received each month for the twelve-month period prior to ECR and the average number of calendar days needed to process a case was 7,022.2 cases and 18.3 days, respectively. For the first 12 months after ECR from August 2013 to July 2014, the average number of applications received per month **decreased to 5,456.5**, but the average processing time **increased to 21.7 days**. For the time period from August 2014 to March 2014, the last month for which data are available, the average number of applications received per month **decreased to 4,304.4**, but the average processing time **increased again to 24 days**.

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

landing at an overseas service facility could require multiple ITAR authorizations: (1) a DSP-5/TAA/GC would be required to authorize the service facility to provide the services; and (2) if DDTC were to consider technical data related to the aircraft to be ITAR-controlled, a DSP-5/TAA might be required to export technical data from the U.S. to the service facility.

The applications for these authorizations would request approval to perform services that are not related (directly or indirectly) to any mission systems on the aircraft, and no ITAR technical data would be needed to perform the services. This could also create the odd situation where DDTC would require a license for the export of technical data and services that BIS does not control for most destinations under the EAR, such as ECCN 9E991 technical data or services. It is difficult to understand how this would further U.S. national security or foreign policy objectives, and it would clog DDTC's and the Department of Defense's ("DoD") license review systems.

3. Requiring Prior Approval from DDTC to Perform Services Unrelated to a Mission System Could Jeopardize Flight Safety by Deterring Routine Maintenance

If DDTC were to require industry to obtain ITAR authorizations prior to providing any service to an aircraft that incorporates a mission system, even when the service is not related to the mission system, customers might be deterred from obtaining routine maintenance in a timely manner, thereby potentially jeopardizing safety of flight. Most, if not all, customers would have difficulty grounding an aircraft for the time needed to obtain an ITAR approval when services needed to maintain the aircraft are not related to any ITAR equipment on board the plane. As DDTC is aware, it often takes several months to obtain a license/TAA, especially during certain times of year, and as discussed above in Section IV.B.1, it would be very difficult to track aircraft to obtain such authorizations in advance. We respectfully ask the agency to reconsider its recent statements on this issue.

C. DDTC Has Several Options to Avoid the Issues Discussed Above

To avoid the issues discussed above, DDTC could: (1) repeal VIII(a)(11) in its entirety; (2) retract the statement referenced in Mr. Stagg's article (and any related advisory opinions) and clarify that only services directly related to the "mission system(s)" of an VIII(a)(11) aircraft are "defense services," and that organizational-level maintenance needed to install or un-install an LRU onto an EAR-controlled aircraft is not a "defense service"; (3) release services that are

Comparing these monthly averages, we see that from the 12 months prior to ECR to the time period from August 2014 to March 2015, the average number of applications received each month **decreased 38%** (from 7,022.2 to 4,304.4); however, the average processing time for each case actually **increased 31.5%** (from 18.3 to 24 days). We understand that the less complicated cases may have moved from DDTC to BIS due to ECR, leaving DDTC with only the difficult applications to review; however, industry had hoped that such a significant decrease in the number of new cases received each month would translate into a corresponding decrease in average processing times or, at a minimum, roughly the same average number of days needed per case.

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

common to ITAR- and EAR-controlled aircraft from the ITAR, similar to the way that 22 C.F.R. § 120.41(b)(3) releases certain items and software from the definition of “specially designed”²⁸

The simplest of these three options would be to repeal VIII(a)(11) in its entirety, and this would also solve the problems discussed above with respect to inefficient staffing and unnecessary Congressional Notifications.

If DDTC were to keep USML Category VIII(a)(11), the agency could clarify that in the context of EAR-controlled aircraft that contain ITAR mission systems, only services directly related to the mission systems are “defense services,” and the value for Congressional Notification considerations is only the value of the defense articles, and not the full value of the EAR-controlled aircraft plus the defense articles. If DDTC elects this option, we respectfully request that DDTC address this in a way that applies to the entire USML and not just to USML Category VIII(a)(11). This is important because the same issue with respect to “defense services” and Congressional Notification values could arise in other contexts. For example, when DDTC determines that an EAR-controlled aircraft is an “attack aircraft” under USML Category VIII(a)(2) because it contains USML Category VIII(h)(6) pylons, only services directly related to the pylons should be “defense services,” and only the value of the VIII(h)(6) pylons should be calculated for Congressional Notification considerations.

V. The Note to USML Category VIII Does Not Solve Any of the Issues Discussed Above; Rather, It Makes It More Difficult for Industry to Sell and Service Aircraft

A. The Note at the End of Category VIII Does Not Solve the Problems Above

One might argue that the ITAR already provide relief from the issues discussed above in the form of a Note at the end of USML Category VIII. However, this is simply not the case. In fact, the Note, which states as follows, actually makes it more difficult for industry to sell and service aircraft.

NOTE: Inertial navigation systems, aided or hybrid inertial navigation systems, Inertial Measurement Units, and Attitude and Heading Reference Systems in paragraph (e) and parts, components, accessories, and attachments in paragraphs (h)(2)-(5), (7), (13), (14), (17)-(19), and (21)-(26) are licensed by the Department of Commerce when incorporated in a military aircraft subject to the EAR and classified under ECCN 9A610. Replacement systems, parts, components, accessories and attachments are subject to the controls of the ITAR.

We understand that the intent of this Note was to provide industry relief from DDTC’s “see-through” rule by stating that EAR-controlled aircraft that incorporate certain USML Cat. VIII defense articles remain subject to the EAR under ECCN 9A610. Unfortunately, this Note does not provide the intended relief, but it does create an additional burden for industry.

²⁸ Although outside of the scope of these comments, we would recommend that DDTC take similar action with respect to the other USML Categories that involve mission systems, *i.e.*, USML Categories VI(a)(4), VII(c), and XX(a)(7), which control vessels, ground vehicles and trailers, and submersibles, respectively.

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

First, the Note appears to be limited to EAR-controlled aircraft that fall under ECCN 9A610. It states “. . . when incorporated in a military aircraft subject to the EAR and classified under ECCN 9A610.” (Emphasis added.) However, the majority of EAR-controlled aircraft that incorporate ITAR mission systems fall under ECCN 9A991.b, not ECCN 9A610. It is not clear whether this Note applies to ECCN 9A991.b aircraft, and a plain-text reading is that it does not. This creates the bizarre situation where an ECCN 9A610 aircraft that incorporates one of the defense articles listed in the Note is controlled under ECCN 9A610, but an ECCN 9A991.b aircraft that incorporates the same item is controlled under the ITAR. Perhaps this was intended, but this is very difficult to explain to our businesses and logistically challenging to manage.

Second, the Note only covers defense articles in USML Cat. VIII, when most of the “mission systems” that pull our EAR-controlled aircraft into USML Category VIII(a)(11) are controlled in other USML Categories, such as USML Category XI or Category XII. For the Note to be effective, DDTC and BIS would need to expand it to cover all “mission systems.”

Lastly, and most importantly, the Note states that the defense articles listed are subject to the EAR “when incorporated in a military aircraft subject to the EAR [but]. . . Replacement systems, parts, components, accessories and attachments are subject to the controls of the ITAR.” This means that we can obtain an export license from BIS (or obtain authorization to use license exception STA) to export an aircraft that incorporates a USML Cat. VIII(h)(13) lithium ion battery or a VIII(h)(18) drive system, but if our customer needs a spare battery or a replacement part, we need to treat the spares and replacement parts as ITAR-controlled defense articles. Accordingly, if we assist our customer in servicing or replacing the items, we would also need to obtain a TAA as services directly related to a defense article would also be “defense services.”

Controlling the items differently when they are incorporated into an aircraft and when they are not is a crucial point for our businesses, because we do not just sell aircraft; rather, we also sell spare and replacement parts, maintenance services, and warehousing and distribution services. We also often need to perform basic, organizational-level maintenance to remove a defense article from an EAR-controlled aircraft and send the item back to the OEM for repair/replacement.

Under the Note, an item’s export control jurisdiction/classification hops from the ITAR to the EAR and back depending on how the item is shipped:

- DDTC controls the item if it is shipped independently from an aircraft;
- DDTC also controls the item if it is incorporated into an ITAR-controlled aircraft, *e.g.*, a USML Category VIII(a)(2) fixed-wing attack aircraft;
- But BIS controls the item if (1) it is incorporated into an ECCN 9A610 aircraft, and (2) the item is enumerated in the Note at the end of USML Category VIII;

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

- However, DDTC controls the item if it is incorporated into an EAR-controlled aircraft and either (1) the aircraft is not an ECCN 9A610 aircraft, or (2) the item is not enumerated in the Note at the end of Category VIII; and
- Finally, DDTC controls the item if we remove it from an ECCN 9A610 aircraft and send it back to the OEM for repair/replacement.

This system creates unnecessary complexity without enhancing U.S. national security or foreign policy objectives in any way, and our IT systems generally do not allow a product to have multiple export classifications depending on the method by which it is shipped.

Additionally, the ITAR and EAR have different standards for determining the nationality of a dual-national employee: BIS's long-standing policy is that "the last permanent resident status or citizenship obtained governs;" however, unless someone is a U.S. person under 22 C.F.R. § 120.15, generally a license from DDTC is required to cover all of a person's nationalities, including all citizenships and the person's country of birth.²⁹ It would be difficult to manage a program if an OEM had foreign persons authorized to work on an EAR-controlled ECCN 9A610 aircraft that incorporated a "mission system" under the EAR's interpretation of nationality but also had to obtain a license from DDTC for the same individuals with respect to any work related to spare/replacement parts for the "mission systems" on the same aircraft.

Although it might be counter-intuitive, it would be easier to manage our exports if the export control classification of an item remained constant, rather than changing based on the platform into which the item is incorporated or the way the item is shipped. To address this, we respectfully request that DDTC make the Note at the end of Category VIII optional. In other words, it would be helpful if industry could elect to obtain either an ITAR license from DDTC for the defense article or an ECCN 9A610 license from BIS for the aircraft. In either case we would provide the complete details of the items at issue and where they would be used, thereby providing DDTC, BIS, and the U.S. government export community full visibility into the proposed transaction

B. If DDTC and BIS Elect to Continue the Approach Embodied in the Category VIII Note, We Would Recommend Expanding the Note to Cover All "Mission Systems" and Moving the Note to a New 600 Series Entry on the CCL

To the extent that DDTC and BIS elect to continue to use the approach embodied in the Category VIII Note, we recommend that the Agencies expand the Note to cover all "mission systems" instead of just the few USML Category VIII entries that it currently covers and move the Note to the CCL. Specifically, we recommend that BIS create a new ECCN 9A610.b to cover "Aircraft incorporating any 'mission system' controlled under the USML not elsewhere enumerated in USML Category VIII(a)."³⁰

²⁹ See BIS's Deemed Export FAQs available at <http://www.bis.doc.gov/index.php/policy-guidance/deemed-exports/deemed-exports-faqs>; see also, DDTC's Agreement Guidelines at § 3.5.

³⁰ BIS could also create sub-paragraphs to cover 9A610.b.1 manned and 9A610.b.2 unmanned and optionally-pilots variants, as discussed above in Part 1, Section III.

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

This would achieve at least four key results:

- It would cover all “mission systems” on the USML and not only the few “mission systems” identified in USML Category VIII.
- It could allow BIS and DoD officials to move cases through the system faster as EAR licenses are subject to a strict timeline;³¹
- It would eliminate the need for Congressional Notification for most of these cases as only 600 Series Major Defense Equipment is subject to Congressional Notification requirements;³²
- It would solve the “defense services” issue identified above in Part 2, Section IV because a service provided to an EAR-controlled aircraft is not a “defense service”;
- It would rectify the SME vs. non-SME discrepancy identified in Footnote 11 above because the CCL does not have SME; and

However, for this approach to succeed, DDTC also would need to modify USML Category VIII(a)(7) to address the fact that “military” is not defined and the entry does not explain which ISR capabilities are controlled as discussed below in Part 3. Without such a fix this alternative solution would not work because USML Category VIII(a)(7) would pull aircraft that perform “military” ISR roles back onto the USML, and a large number of the aircraft that could move to ECCN 9A610.b are ISR aircraft used for or by U.S. and foreign military and quasi-military entities.

VI. USML Category VIII(x) Does Not Provide Relief Because Sub-Paragraph (x) Applies to EAR Items Used in ITAR Items, and This Is the Opposite Situation.

During meetings with U.S. government officials at the end of 2014, some asked whether USML Cat. VIII(x) addresses the issues discussed above. Unfortunately, it does not. USML Cat. VIII(x) does not provide relief, because the (x) sub-paragraphs allow industry to include items subject to the EAR on an ITAR license obtained from DDTC if the EAR-controlled items are “used in or with defense articles.” USML Category VIII(a)(11) involves the opposite situation where an ITAR-controlled item is used in or with an EAR-controlled platform.

It would create an odd situation if DDTC were to instruct industry to obtain a DSP-5 permanent export license under USML VIII(h)(13) for a lithium ion battery and tack on the aircraft with which the battery is used as a USML Category VIII(x) commodity. Based on current DDTC policy, this would also likely trigger Congressional Notification requirements, which we do not think would be appropriate for the reasons discussed above in Part 2, Section III.

³¹ Executive Order 12981 (Dec. 5, 1995) implemented at 15 C.F.R. § 750.4.

³² 15 C.F.R. § 734.5.

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

PART 3 – DDTC SHOULD ENUMERATE WHICH AIRCRAFT FALL UNDER USML CATEGORY VIII(A)(7); DDTC SHOULD EXCLUDE EAR-CONTROLLED AIRCRAFT FROM THIS ENTRY AND CONTROL THE DEFENSE ARTICLES THAT PROVIDE ISR CAPABILITIES TO EAR AIRCRAFT IN THE USML ENTRIES INTO WHICH THE ISR DEFENSE ARTICLES FALL.

Even if DDTC and BIS agree with the recommendations above, take action to clarify which UAVs and OPVs warrant ITAR control, and decide to control “mission systems” in their primary USML entries rather than controlling aircraft that contain these systems in the secondary USML Category VIII(a)(11), certain EAR-controlled aircraft may continue to be pulled back onto the ITAR if they are deemed to perform “military intelligence, surveillance, and reconnaissance” missions under USML Category VIII(a)(7). We recommend that DDTC clarify USML Category VIII(a)(7) to focus on aircraft inherently designed to be ISR aircraft and exclude EAR-controlled aircraft that incorporate USML ISR systems. Rather, DDTC should control the USML ISR systems in the USML entries into which these systems fall for all of the reasons discussed above in Part 2:

- The USML ISR systems are already adequately controlled elsewhere on the USML, and it is not necessary to create a secondary USML entry to control EAR aircraft that incorporate such systems;
- DDTC and BIS have a process to license EAR-controlled aircraft that incorporate USML ISR defense articles: obtain a license from DDTC for the ISR defense articles (and any other defense articles on the aircraft) and a separate license from BIS for the aircraft, when such a BIS license is required;
- USML Category VIII(a)(7) leads to inefficient staffing at DDTC and DoD and unnecessary Congressional Notification requirements. Rather the cases should be staffed to the groups that control the ISR systems, and the value for notification purposes should be the value of the ISR defense articles, rather than the value of the EAR aircraft; and
- Only services directly related to the USML ISR systems (and any other defense articles on the aircraft) should be “defense services,” and services common to ITAR- and EAR-controlled aircraft should not be ITAR-controlled.

Although AIA understands that USML Category VIII(a)(7) may have been intended to capture aircraft inherently designed as ISR aircraft for military use, it could potentially capture aircraft that otherwise fall under the jurisdiction of the EAR as ECCN 9A610 or ECCN 9A991 aircraft, or ECCN 9A012 UAVs, but which incorporate certain non-ITAR ISR systems. For example, an OEM could add an EAR-controlled camera to an ECCN 9A991.b aircraft or an ECCN 9A012 UAV. As discussed above in Part 1, Section 1, “military” is not defined, and, therefore, if these aircraft were operated by any branch of the U.S. or foreign armed forces, they could be pulled onto the ITAR as USML Category VIII(a)(7) “military intelligence surveillance and reconnaissance aircraft.” Moreover, since “intelligence, surveillance and reconnaissance” is also not defined, USML Category VIII(a)(7) could lead to absurd results, if taken to its logical extreme: a member of the U.S. armed forces flying on a commercial airline in a window seat could transform the aircraft into a “military intelligence surveillance and reconnaissance aircraft.”

**AIA Comments to DDTC and BIS re: USML Category VIII and CCL Category 9
May 1, 2015**

This is contrary to the stated intent of ECR to provide a “positive” list using objective criteria. We respectfully request that DDTC and BIS take the actions recommended above to address this issue.

* * * * *

We appreciate DDTC’s and BIS’s consideration of these issues, and we look forward to discussing these topics with you further.

Thank you



May 1, 2015

Response to Notice of Inquiries in Federal Register Vol 80, No. 40

Department of State Public Notice 9050; Department of Commerce Docket No. 150210135-5182-01

The Aerospace Industries Association (AIA) and our member companies appreciate the opportunity to provide suggested revisions to Category XIX (Gas Turbine Engines and Associated Equipment) of the U.S Munitions List (USML) and the corresponding controls on the Commerce Control List (CCL) for military gas turbine engines. Conducting periodic reviews of the USML and CCL to account for new applications of current technology as well the capabilities of future technology is critical to ensuring the longevity and effectiveness of the Export Control Reform initiative. AIA is encouraged that the Administration shares this view, and we would like to highlight the below potential revisions and updates for possible consideration.

Minor Components:

There are several opportunities to clarify ambiguities in the current ITAR/EAR language around the control of minor components, as well as opportunities to modify and expand the list to simplify the export of minor parts of engines and aircraft. Examples include:

Shims vs Spacers: 9A691.y.6 captures shims, yet the ‘specially designed’ (b)(2) definition releases all spacers. It is unclear how industry would differentiate a shim from a spacer, and what technical reasoning would treat them differently.

Clamps: 9A619.y.5 lists 4 specific types of clamps, but there are other generic clamps that are equally minor, for example ‘half-clamps’, which hold tubes down against a structure. Can the language be modified to capture clamps generically?

Oil and fuel lines: 9A619.y.2 captures Oil lines and tubes and 9A619.y.3 captures Fuel lines and hoses. It’s unclear what differentiates a tube from a hose, or why it would be important to differentiate fuel transfer from oil transfer functions (or any other liquid). It would simplify classification of items to combine these categories into a single group, and include the fittings and adapters common to these lines.

Air lines: 9A619.y.8 captures Air, fuel, and oil manifolds, but air lines are not released like oil and fuel lines in y.2 or y.3 above. Air lines should be included in the categorization above. A single category for all 3 would simplify classification and exports.

Brackets: Brackets whose primary construction is sheet metal and whose function is to position and support wiring, oil, fuel, or air lines, or engine accessories should be released from 9A619.x to 9A619.y,

if not released in specially designed (b)(2). More complicated brackets (such as engine mounts) made from castings or forgings, would maintain 9A619.x control.

Cables and harnesses: Wiring harnesses are the electrical equivalent of fuel and oil lines – they transfer electrical signals between sensors and components, and have no military functionality. They should also be released to 9A619.y

Minor Components of 19.f.1 listed engines:

Items caught in 19.f.1 but described in ‘.y’ are not currently released from 19.f.1 controls. Modifying the 19.f.1 control to carve out items identified in 9A619.y would complete the release of many low level parts. There are currently suppliers whose products meet the definitions to release parts to 9A619.y, but are still ITAR controlled because of unique use on 19.f.1 listed engines.

Tooling for 19.f.1 listed engines

The ITAR definitions in 19.f.1 call out equipment for listed engines as ITAR controlled. EAR 9B619 specifically notes that USML Category XIX(f)(1) controls “parts,” “components,” “accessories,” “equipment,” and “attachments” “specially designed” for the engines described in Category XIX(f)(1), but does not control the commodities enumerated or otherwise described in ECCN 9B619.

Concerns have been raised that this type tooling, in its physical form, may reveal technical data important to the ITAR controlled engine; therefor the tooling deserves control on the ITAR.

Regardless of the outcome of that inquiry, the ITAR needs to specifically echo the resulting note written in the EAR, as the EAR does not have jurisdiction on items controlled in the ITAR, and the current ITAR language does not release these items.

Development engines and advanced technology programs

The ITAR does not currently capture development engines where they do not meet the performance criteria in 19.a-19.e. Similarly, 19.g only captures technical data related to a defense article (other than classified data), so technology developed under an advanced technology program, unrelated to a controlled defense article, is not captured on the ITAR, regardless of the future intended purpose of the work.

As a result, an advanced technology compressor demonstrator program for a next generation helicopter engine, or even an augmentor general technology program, funded entirely by DoD funds, may not be captured on the ITAR.

The ITAR should be updated to provide for cases where such technology should be protected.

Emerging Technologies

Additive Manufacturing is an emerging technology with significant potential to simplify the manufacture of aviation components, and allow more complex design features in components like turbine blades. Some of the technology leadership in this area is in Europe. It is critical that proper controls be developed to enable US industry to work closely with European partners to develop capability, improve national security, and maintain competitiveness.

SiC (Silicon Carbide) bearings are an area of potential future capability where this material system may allow extended operations with loss of lubrication, leading to enhanced durability and safety of commercial and military engines. This same technology, has potential in missiles, where removal of lubrication systems provides weight and range advantage. Future controls in this area need to provide a proper dividing line between legitimate commercial application and missile technology capability.

Augmentor and nozzle parts

The ITAR currently captures cooled augmentors in 19.f.2, but does not identify individual parts of these components. Other ITAR categories identify both components and parts (eg. 19.f.1 and 19.f.6). The EAR identifies technology for many augmentor parts within 9E619.b.7. The 2 regulations are written at different levels of detail. Neither the ITAR nor the EAR specifically identifies these augmentor parts in hardware categories. It would benefit industry to make it clear where these parts should be captured.

Controls technology for 9A619.a engines

For commercial engines, approximately 75% of the control technology is NLR, leaving specific technologies in categories 9E003.h.1-3. 9A619.a military engines capture controls technology in 9E619.c.6, which broadly captures technology that would be NLR on commercial engines. Whereas the 9A619.a engines are generally older technology engines, and often commercial engine derivatives, the 9E619.c.6 category is capturing technology generally available NLR elsewhere.

AirBorn, Inc. has been manufacturing passive electrical connectors for 58 years and passive connector cable assemblies for 35 years for commercial and military applications. Originally, AirBorn supported commercial and military aircraft markets and expanded from there. Our connector/cable assemblies are used in many applications such as oil drilling, medical, commercial/military aircraft, satellites, missiles, radio programs, radar programs, tanks, etc.

Our connector and cable assemblies basically start with our standard catalog connectors and are modified to meet customer's custom configurations for their end use application. For example, we may modify a connector cable assembly to have four EAR99 connectors connected by wire per a customer's drawing for a commercial aircraft and this would be EAR99. We could also modify a connector cable assembly to have four different EAR99 connectors connected by wire per a military customer's application and it would be ITAR controlled. The point being that the cable assemblies are configured to fit into a customer's enclosures, so the positioning of the wires connected to four connectors does not provide a critical military or intelligence advantage for the U.S.

- 1) At this time, based on **VIII(h)(1)**, if we are modifying connectors or connector cable assemblies for any aircraft listed in this entry, we are classifying our connectors/cable assemblies ITAR controlled under this category. Connectors/cable assemblies are not specifically listed here but they are components of the aircraft. The connectors/cable assemblies used in these specific aircraft are no different than connectors/cable assemblies used in other military or commercial aircraft. The primary differences between aircraft systems, Commercial or Military, are the number of EAR99 connectors on the cable assembly and the wire length between connectors.

Based on the above information, we propose that connectors and cable assemblies move to the 9A610 category. Please note that in ECCN 0A606, under .y.6, cables, cable assemblies, and connectors are specifically listed. In ECCN 3A611.y.1, connectors are specifically listed. For the 9A610 we request to add a .y category for cables, cable assemblies and connectors.

- 2) AirBorn also sells connectors and connector cable assemblies to manufacturers of HMCS and JHMCS. In the final rule from the Federal Register Vol 78, No 73 on April 16, 2013, USML category **VIII(h)(15)** stated:

(15) Integrated helmets incorporating optical sights or slewing devices, which include the ability to aim, launch, track, or manage munitions (e.g., Helmet Mounted Cueing Systems, Joint Helmet Mounted Cueing Systems (JHMCS), Helmet Mounted Displays, Display and Sight Helmets (DASH));

In a later revision, **VIII(h)(15)** was changed to state:

(15) Integrated helmets incorporating optical sights or slewing devices, which include the ability to aim, launch, track, or manage munitions (e.g., Helmet Mounted Cueing Systems, Joint Helmet Mounted Cueing Systems (JHMCS), Helmet Mounted Displays, Display and Sight Helmets (DASH)); and specially designed parts, components, accessories, and attachments therefor;

As stated in the information in #1 above, AirBorn's connectors and cable assemblies are configured to fit into a customer's enclosure but the design of these connectors and connector cables assemblies is not specific to this application. These connectors and cable assemblies do not provide a critical military or intelligence advantage for the U.S. We recommend that "and specially designed parts, components, accessories and attachments therefor;" be removed from the ITAR and move connectors, cables and cables assemblies to 9A610.

3) All comments above also relate to the classification of connectors and cables assemblies in USML category **XIX(f)(1)** which incorporates all parts and components for specific U.S. origin engines. AirBorn's connectors and cable assemblies are configured to fit into a customer's enclosure but the design of these connectors and cable assemblies are not specific to this application. We recommend that connectors and cable assemblies for specific U.S. origin engines move to 9A619.

Thank you for your consideration.

Regards,

Donna Logan

Regulatory Compliance Manager | [AirBorn, Inc.](#)

T 972-931-2903 | F 972-931-9305 | logand@airborn.com



Request for Comments Regarding Review of the United States Munition List Categories VIII and XIX

Public Notice 9050

To the Attention of DDTCpubliccomments@state.gov

Airbus Group N.V. offers the following comments in response to Public Notice 9050 pertaining to USML Category VIII and XIX.

Classification of Foreign-origin Aircraft under Category VIII(a)(15)(ii)

Category VIII(a)(15)(ii) covers foreign-origin aircraft which are specially designed to provide functions equivalent to aircraft listed in Category VIII(a)(15)(i). The U.S. military designations listed in Category VIII(a)(15)(i) are generally unfamiliar to non-U.S. military aircraft manufacturers and their suppliers. For example, it is not obvious that the designation “K” would refer to refueling tanker aircraft.

Proposed Changes (in bold):

Note (3) to Paragraph (a): U.S. Military Designations are as follows: A-Attack, B-Bomber, E-Special Electronic Installation, F-Fighter, K-Refueling Tanker, M-Multi-mission, P-Patrol, R-Reconnaissance, or S-Anti-submarine.

Change paragraph VIII(a)(15):

Currently reads: (ii) Foreign-origin aircraft specially designed to provide functions equivalent to those of aircraft listed in paragraph (a) (15) (i).

Suggested rewrite: (ii) Foreign-origin aircraft specially designed to provide functions equivalent to those of aircraft listed in paragraph (a)(1) to (a)(14) and (a)(16) of this category.

Reclassification of Articles Previously Classified as VIII(h)

As part of Export Control Reform (ECR), U.S. suppliers have been issuing notices to customers – U.S. and non-U.S. – reclassifying their products. It is clear that many U.S. suppliers do not fully understand the ECR “order of review” and the concept of “specially designed.” For example, one



supplier reclassified a pre-ECR USML Category VIII(h) component for a target drone as USML Category IX(a) without working through the entire category sub-paragraphs or “specially designed” analysis as provided under 22 CFR 121.1(b) and (d). The component should have been classified as an EAR 600 series item, not USML.

Airbus Group recommends that the current “Order of Review” in §121.1(b) provide additional clarity on how to determine whether an end-item, system, part, or component is a Defense Article.

Proposed Change (in bold):

Change Section 121.1(b)(1) to add a note:

§121.1(b)(1) Order of Review. “In order to classify your article on the U.S. Munitions List, you should begin with a review of the general characteristics of your item. This will usually guide you to the appropriate category on the U.S. Munitions List. Once the appropriate category is identified, you should match the particular characteristics and functions of your article to a specific entry within the appropriate category.”

NOTE to (b)(1): An End-item, system, part, or component is considered a Defense Article if:

(a) It is positively listed in a USML Category sub-paragraph, OR

(b) It is covered by a USML category/sub-category “catch-all” control AND is “specially designed” as defined in 120.41.

An end-item, system, part, or component is not a Defense Article if it is NOT positively listed AND is NOT covered by a “specially-designed” clause.

For further information, please contact Corinne Kaplan at 703-466-5741 or Corinne.Kaplan@eads-na.com.

Respectfully,

Pierre Cardin

SVP, Group Export Compliance Officer

Alexander Groba

Coordinator U.S. Regulations

BAE Systems plc
Warwick House, PO Box 87
Farnborough Aerospace Centre
Farnborough, Hampshire GU14 6YU
United Kingdom



VIA E-MAIL TO DDTCPUBLICCOMMENTS@STATE.GOV

May 1, 2015

Mr. C. Edward Peartree
Director, Office of Defense Trade Controls Policy
PM/DDTC, SA-1, 12th Floor
Directorate of Defense Trade Controls
Bureau of Political Military Affairs
U.S. Department of State
Washington, D.C. 20522-0112

Subject: Request for Comments Regarding Review of United States Munitions List Categories VIII and XIX

Dear Mr. Peartree,

BAE Systems plc (BAE) offer the following comments in response to the request from the Directorate of Defense Trade Controls (DDTC) on March 2, 2015 (80 Fed. Reg. 11314). BAE appreciates your efforts to seek feedback with regard to recent revisions to USML Categories VIII and XIX and related implementation of U.S. Export Control Reform (ECR).

1. Jurisdiction and Self Classification. DDTC and BIS have encouraged non-U.S. companies to make their own determination of jurisdiction and classification for transitioning items.¹ This has been a significant concern and challenge for non-U.S. defense industry participants in Europe, both end manufacturers and suppliers. Companies are at times having trouble obtaining jurisdiction and classification information from producers and exporters. Where European companies are unable to obtain this information, they are fearful of U.S. enforcement activities for well-meaning, technical errors in self-classification. This concern is negatively impacting some U.S. ECR goals.

¹ See, e.g., 73 Fed. Reg. 22740 at 22570 (Foreign persons or U.S. persons abroad that have USML items in their inventory at the effective date of transition should review both the USML and the CCL to determine the proper jurisdiction); DDTC FAQs on Transitioning Items / Commodities (Q: May a foreign company self-determine that an item previously shipped on a USML license is no longer ITAR controlled? Or must it wait for the U.S. supplier to confirm the change of control in writing? A: Foreign persons may self-determine the jurisdiction of the item. There is no requirement for a confirmation in writing. However, if doubt exists on the jurisdiction of an item, then the foreign person should contact the original exporter or manufacturer for clarification.).

Proposed Action:

- A. Take steps to encourage U.S. manufacturers and exporters to provide classification details to European industry. In particular, this might include:
- Making complete and accurate destination control statements a point of emphasis in regulator outreach and enforcement for exports and reexports.
 - Designing communication strategies with U.S. industry to encourage sharing of updated, post-ECR jurisdiction and classification.
- B. We encourage DDTC to consider assurances to non-U.S. companies which undertake good-faith attempts to self-classify, that any enforcement for errors will be reasonable and that a significant mitigating factor will be where good faith attempts to obtain the information from U.S. sources have been unsuccessful.

2. Reexports of Transitioned EAR-Controlled Items Under DDTC Authorizations. Many DDTC licenses and authorizations are nearing the end of their two year period of validity for items, software and technical data that have transitioned to EAR control. Some of these DDTC licenses or authorizations provided for multiple steps for manufacture, subsequent reexports within the supply chain and later delivery to the end user. Foreign manufacturers are facing a gap where transitioning DDTC licenses or authorizations cease to be valid two years after the effective date for applicable USML/CCL changes, but reexports of now EAR-controlled items are still pending under long-term contracts.

We ask that DDTC clarify that where the first step in a chain of exports and reexports has already occurred under a DDTC license or authorization while still valid, future reexports remain authorized even after the transitional license period ends. It is clear that new exports would not be permitted after the two year transitional period (or if the license or agreement otherwise expires). It is not clear whether a string of exports and reexports, if begun prior to the effective date of ECR or during the two year transition period, can be completed afterward.

To illustrate, imagine a situation where an ITAR-controlled subsystem is exported to a European country for an aircraft or ship with a long build time. A DDTC authorization allowed the initial export of the subsystem, subsequent reexport of the subsystem for various manufacturing steps, and years later the reexport of the end item to a customer. Some or all items under the authorization have transitioned to EAR control, and further reexports are expected after the two year transition period.

DDTC addressed reexports/retransfers in its April 16, 2013 Final Rule amending the ITAR, 73 Fed. Reg. 22740 at 22570:

If reexport or retransfer was previously authorized under a DDTC authorization, then that reexport or retransfer authority remains valid. The three scenarios for which this applies are: 1) reexport/retransfer authority granted through a program status DSP-5; 2) the sales/distribution territory of a manufacturing license or warehouse and distribution agreement if the agreement continues to provide the

export authority; or 3) any stand-alone reexport/retransfer authorization received pursuant to ITAR § 123.9.

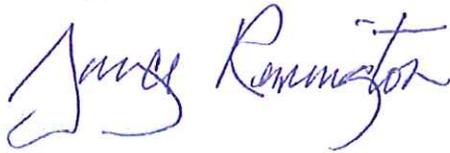
However, this followed language in the same Final Rule at page 22749 which described the validity period for DDTC licenses and agreements following transition (generally 2 years if not otherwise expired). Thus, it is not clear if the language above authorizing continued reexports/retransfers applies for licenses or authorizations beyond two years after transition.

Proposed Action:

We ask that DDTC provide clarification (or if necessary amend its rules) in coordination with BIS so that non-U.S. companies may use DDTC licenses to reexport transitioned EAR items after the two-year license validity period where the first export in the chain of exports and reexports occurred prior to transition or within the two year validity period.

Please do not hesitate to contact the undersigned if you have any questions or would like to discuss these comments in greater detail by phone at +44 (0) 1252 383522 or by email at joyce.remington2@baesystems.com.

Sincerely,



Joyce Remington
Group Deputy Head of Export Control – Licensing & Policy



Office: 817-280-2042
Email: jlohmer@bh.com

Post Office Box 482
Fort Worth, Texas 76101

May 1, 2015

RESPONSE TO REQUEST FOR COMMENTS RE: USML CATEGORY VIII AND CCL CATEGORY 9

On March 2, 2015, the Department of State, Directorate of Defense Trade Controls (“DDTC”) and the Department of Commerce, Bureau of Industry & Security (“BIS”) issued Federal Register notices soliciting comments from industry on the implementation of Export Control Reform (“ECR”) with respect to military aircraft and military gas turbine engines and setting the deadline for such comments as May 1, 2015.¹

Bell Helicopter Textron Inc. (“Bell Helicopter”) respectfully submits the following comments on U.S. Munitions List (“USML”) Category VIII(h)(2) and VIII(h)(18).

DDTC Should Remove “Interconnecting Drive Shafts” from USML Category VIII(h)(2) and Add “and ‘Specially Designed’ Ballistically Tolerant Parts and Components Therefor” to USML Category VIII(h)(18).

Among other things, USML Category VIII(h)(2) controls “interconnecting drive shafts.” An interconnecting drive shaft is a mechanical device that connects two rotors to two engines on a helicopter or tiltrotor aircraft and allows one engine to drive both rotors in the event that the other engine fails. An interconnecting drive shaft does not provide any specific military functionality; rather it is essential to safety of flight.

We respectfully request that DDTC remove “interconnecting drive shafts” from USML Category VIII(h)(2). Not only does the interconnecting drive shaft not provide any specific military functionality, but controlling all tiltrotor interconnecting drive shafts on the USML is inconsistent with past classification determinations for tiltrotor aircraft and tiltrotor aircraft drive train systems issued by DDTC and BIS.

Bell Helicopter understands that the intent of ECR was not to capture items previously determined to be controlled by the EAR, and the EAR has long controlled technology for helicopter and tiltrotor power transfer systems. In fact, Bell Helicopter received a Commodity Jurisdiction determination in 1997 ruling that a specific tiltrotor aircraft that contains an interconnecting drive shaft falls under the jurisdiction of the EAR, and in 2005, BIS issued a CCATS stating that the power transfer technology for the aircraft falls under ECCN 9E003.d. Bell specifically described the interconnecting drive shaft in the information submitted to BIS in connection with this CCATS. Therefore, not all tiltrotor aircraft are ITAR-controlled, nor should all interconnecting drive shafts be ITAR-controlled.

As DDTC and BIS are aware, ECCN 9E003.d controls “technology” required to “develop” or “produce” a tiltrotor power transfer system, which includes the interconnecting drive shaft; however, USML Category VIII(h)(2) covers the interconnecting drive shaft produced using this technology. We are unaware of any other item that is ITAR-controlled when the technology required to develop or produce the item has been EAR-controlled for a number of years.

Bell Helicopter understands that the U.S. has an important lead in the development of tiltrotor technology, and we agree that it should be controlled for more than anti-terrorism reasons; however, ECCN 9E003.d is controlled for national security reasons, which requires a license to most destinations. Bell Helicopter believes that controlling tiltrotor interconnecting drive shafts in a similar CCL entry subject to national security export license requirements would be an appropriate export classification.

¹ Notice of Inquiry; Request for Comments Regarding Review of United States Munitions List Categories VIII and XIX, 80 Fed. Reg. 11314 (DDTC); Notice of Inquiry; Request for Comments Regarding Controls on Military Aircraft and Military Gas Turbine Engines on the Commerce Control List, 80 Fed. Reg. 11315 (BIS).

Bell Helicopter recognizes, however, that certain aircraft drive systems may continue to warrant ITAR control. To cover “interconnecting drive shafts” that truly warrant ITAR control, we recommend that DDTC add “and ‘specially designed’ ballistically tolerant parts and components therefor” to USML Category VIII(h)(18). This would capture such drive shafts and their component parts that have been “specially designed” to achieve a specific military purpose, rather than bluntly capturing all tiltrotor interconnecting drive shafts under USML Category VIII(h)(2).

Thank you for your consideration. We hope that these comments will help DDTC and BIS continue to improve the U.S. export control system.

Thank you,



Julia E. Lohmer

Julia Lohmer

Director, Global Trade Compliance

March 31, 2015

Specially Designed in USML Categories VIII and XIX

The March 2, 2015 Notice of Inquiry regarding USML Categories VIII and XIX described the intent to create a “positive list” which, to the extent possible, did not use catch-all phrases. This comment identifies possible means to reduce use of the “specially designed” catch-all phrase.

Specially designed in Category VIII

VIII(a)(13) Optionally Piloted Vehicles (OPV) (i.e., aircraft ~~specially designed~~ developed to operate with ~~and~~ or without a pilot physically located in the aircraft)

There is no performance level, characteristic, or function (per part (a)(1) of the 120.41 “specially designed” definition) which, if not achieved or exceeded, would remove the aircraft from this control. This leaves “As a result of development” as the only basis for determining whether or not the aircraft is “specially designed.” Therefore, substituting “developed” for “specially designed” would be clearer.

Commercial aircraft with pilots physically located in the aircraft are usually operated most of the time by persons not physically in the aircraft. It is impossible for an aircraft simultaneously to have a pilot physically located in the aircraft and not physically located in the aircraft. Therefore, “and” should be changed to “or.”

MTCR Items I.A.2 and 19.A.2, on unmanned aerial vehicles with a range greater than 300 km, do not use the words “specially designed.”

VIII(a)(15(ii) Foreign-origin aircraft ~~specially designed~~ developed to provide functions equivalent to those of the aircraft listed in paragraph (a)(15)(i) of this category.

The only function identified in (a)(15)(i) is “bear an original military designation of A, B, E, F, K, M, P, R, or S.” This provides no basis on which to determine whether the foreign-origin aircraft achieves or exceeds that function (per part (a)(1) of the 120.41 “specially designed” definition). This leaves “As a result of development” as the only basis for determining whether or not the aircraft is “specially designed.” Therefore, substituting “developed” for “specially designed” would be clearer.

Note 1 to paragraph (a): Aircraft ~~specially designed~~ for military applications that are not identified in paragraph (a) of this section are subject to the EAR and may be classified as ECCN 9A610, ~~including any unarmed military aircraft, regardless of origin or designation, manufactured prior to 1956 and unmodified since manufacture. Aircraft with modifications made to incorporate safety of flight features or other FAA or NTSB modifications such as transponders and air data recorders are considered “unmodified” for the purposes of this paragraph~~

EAR, not ITAR, determines the proper classification of items subject to the EAR. The EAR definition of “specially designed” differs from the ITAR definition. Other verbiage recommended for deletion is similar, but not identical, to 9A610.a and its Notes 1 and 2.

Move VIII(d) to become a sub-paragraph of VIII(h) and limit MT portion to launching.

Launching and recovery equipment are aircraft accessories. Moving VIII(d) to VIII(h) would clarify that the releases in part (b) of the specially designed definition are applicable. MTCR 12.A.1, re launching apparatus, uses “designed or modified” rather than “specially designed.” The MTCR definition of “specially designed” is narrower than the 120.41 definition. The MTCR definition of “designed or modified” is closer to the 120.41 “specially designed” definition. MTCR does not control “recovery” equipment.

Delete VIII(e).

It adds no technical specificity to ECCNs 7A003 and 7A103.

If, for whatever reason, VIII(e) is not deleted:

- 1 move it to become a sub-paragraph of VIII(h);
Inertial navigation systems are components of aircraft.
- 2 delete “and all specially designed components, parts, and accessories therefor”;
Such components of components are inconsistent with the 120.45(b) first sentence: “A component is an item that is useful only when used in conjunction with an end-item.” If that inconsistency were resolved, then this portion of VIII(e) would be covered by 9A610(x).
- 3 after “or controlled in ECCN 9A610” in VIII(e), insert: “(except as specified otherwise in the Note at the end of Category VIII)”
- 4 add to 7A003 and 7A103: “not controlled by VIII(e)”

If VIII(e) is not deleted because technical specifications for inertial navigation systems and equipment for VIII(a) aircraft are added:

- 1 delete “specially designed” before “for aircraft”
The technical specifications would make specially designed redundant.

VIII(f) Developmental aircraft funded by the Department of Defense via contract or other funding authorization, and ~~specially designed~~ developmental parts, components, accessories, and attachments therefor

The portion of parts, components, accessories, and attachments which should logically be controlled in VIII(f) are those which are developed for this purpose. No subset of such developmental items should be removed from control by an interpretation of part (b) of the definition of “specially designed.”

Note 1 to paragraph (f): Delete “specially designed”

The parts, components, accessories, and attachments described in the rest of this Note should not be controlled by VIII(f), whether or not they are specially designed.

VIII(h)(1) Parts, components, accessories, attachments, and equipment ~~specially designed for~~ used only in one or more of the following U.S.-origin aircraft: ...

Delete Note to paragraph (h)(1)

The special interpretation of specially designed in the Note to (h)(1) is radically different from the definition of specially designed in 120.41 and would be completely covered by

changing “specially designed for” to “used only in one or more of” in (h)(1).

VIII(h)(2, 3, 4, 5, 6, 11) Delete “and specially designed parts and components therefor”;
in (14) Delete “and specially designed parts and components for such lift fans and roll posts”;
in (15) Delete “and specially designed parts, components, accessories, and attachments therefor”
Second order components of components are inconsistent with the definition of components (see comment in second bullet on VIII(e) above). The items proposed for deletion would be controlled by 9A610.x.

The following portions of VIII(h) may now have, or could easily be augmented to have, enough technical description to permit deletion of specially designed:

- § VIII(h)(7) damage or failure adaptive flight control;
- (18) flight control functioning after impact of a 7.62mm or larger projectile;
- § (21) printed circuit boards or patterned multi-chip modules layout for Category VIII articles;
- § (22)(iii) radomes with ballistic protection from bullets, shrapnel, or blast;
- § (24, 25, 26) thermal engines, thermal batteries, thermionic generators for Category VIII or 9A610 aircraft

The following portions of VIII(h) may describe such general purpose items as to warrant deletion of the sub-items:

- § VIII(h)(17) mission computers, vehicle management computers, and integrated core processors;
- § (19) thrust reversers;
- § (23) fuel cells for Category VIII or 9A610 aircraft

In (h)(7, 24, 25, 26) and in (17, 19, 23) if retained, after “or controlled in ECCN 9A610” insert “(except as specified otherwise in the Note at the end of Category VIII)”

Add to 120.42 Subject to the Export Administration Regulations (EAR):

Pursuant to Export Administration Act Section 17(c), “any product (1) which is standard equipment certified by the Federal Aviation Administration, in civil aircraft and is an integral part of such aircraft, and (2) which is to be exported to a country other than a controlled country, shall be subject to export controls exclusively under this Act. Any such product shall not be subject to controls under section 38(b)(2) of the Arms Export Control Act (22 U.S.C. 2778(b)(2)).”

The pre-ECR Category VIII Note aimed at complying with EAA17(c) (*i.e.*, FAA-certified components are Commerce jurisdiction) was deleted without a prior opportunity for public comment. The stated basis for its deletion was that specially designed part (b) releases would suffice. This may be true where specially designed appears in the USML control. But it clearly would not be true if specially designed did not appear in the USML text. Problems could arise not only in VIII(h) but also in other paragraphs of VIII which include components and in other USML Categories, such as XIX and XI, which include aircraft components. There is a great irony in the present situation. One of the prime objectives of the ECR is not to use catch-all phrases, such as specially designed,

especially in the USML. But dependence on specially designed to comply with 17(c) leads to greater use of specially designed. Now, this is the only way to make sure that nothing which is, or might become, FAA-certified is left without a specially designed modifier.

Specially designed in Category XIX.

Application of the definition of “specially designed” to its uses in Category XIX raises three special problems:

1. The Category XIX heading and sub-Categories (a, b, c, d) appear to treat “engines” as end-items (governed by part (a)(1) of the 120.41 “specially designed” definition); whereas those engines are components of aircraft or other means of transportation (governed by parts (a)(2) and (b) of the “specially designed” definition).
Therefore, the following analyses of specially designed in (a)(1, 4,5), (b) and (c) will consider both of the 120.41 definitions.
2. The Category XIX heading and sub-Category (e) appear to treat “associated equipment” as end-items; whereas 120.45(c) defines “accessories and attachments” as “associated articles for any component, equipment, system, or end- item ...”
Therefore, the following analysis of specially designed in (e) will consider both of the 120.41 definitions.
3. The definition of “specially designed” in the Note to XIX(f)(1) is radically different from the definition in 120.41. Instead, like the Note to VIII(h)(1), it uses a unique definition, which is substantially the same as the MTCR definition of “specially designed.”
Therefore, the following analysis of (f)(1) and its Note will seek means to avoid the use of specially designed.

XIX(a) Turbofan and Turbojet engines ...

- (1) with or ~~specially~~ designed for thrust augmentation (afterburner)

Assuming the military significance of thrust augmentation, there may, or may not, be features which unequivocally identify engines “designed for,” but not yet “with,” thrust augmentation. If there are such features, engines with those features should not be decontrolled because the features were added as a production modification rather than “as a result of development” and, therefore, were ineligible for (a)(1) or became eligible for release under (b)(3)(i).

If, on the other hand, there are no such features, engines without thrust augmentation should not be controlled simply because thrust augmentation might be added. In that case, XIX(a)(1) should be further modified by deletion of “or specially designed for,” rather than just deletion of “specially,” as shown above.

- (a)(4) ~~specially designed for~~ sustained 30 second inverted flight or negative g maneuver
- (a)(5) ~~specially designed for~~ high power extraction greater than 50 percent of engine thrust at altitudes greater than 50,000 feet
- (b) ... ~~specially designed~~ with oil sump sealing when the engine is in the vertical position

These technical descriptions appear to be adequate to permit deletion of “specially designed.”

- (c) ... ~~specially designed for armed or military~~ unmanned aerial vehicle systems, cruise missiles, or target drones if armed or developed for military applications...

The word “armed” is adequate to permit deletion of “specially designed.”

The word “military” connotes no “performance levels, characteristics, or functions” against which to measure the applicability of (a)(1) of the specially designed definition. This leaves only “as a result of development” in (a)(1).

Therefore, “developed for military application” would capture the only relevant portion of (a)(1); would be clearer than “specially designed for military”; and would make it evident that the (b)(3) release from specially designed would not apply.

- (e) Digital engine control systems ... ~~specially designed~~ for gas turbine engines controlled in this category

The Note to paragraph (e) appears to provides enough technical detail to permit deletion of “specially designed.”

- (f)(1) Parts, components, accessories, attachments, and equipment ~~specially designed for~~ used only in one or more of the following U.S.-origin engines: ...

Delete Note to paragraph (f)(1)

Changing “specially designed for” to “used only in one or more of” in (f)(1) would be completely consistent with the Note to (f)(1) and make that Note redundant.

- (f)(2) Hot section components ... ~~specially designed for~~ developed with knowledge they would be for use only in gas turbine engines controlled in this category.

- (f)(3) Uncooled turbine blades, vanes, disks, and tip shrouds ~~specially designed for~~ developed with knowledge they would be for use only in gas turbine engines controlled in this category.

- (f)(4) Combustor cowls, diffusers, domes, and shells ~~specially designed for~~ developed with knowledge they would be for use only in gas turbine engines controlled in this category.

- (f)(5) Engine monitoring systems ... ~~specially designed for~~ developed with knowledge they would be for use only in gas turbine engines and components controlled in this category.

The recommended revisions is (f)(2.3.4.5) would not change the scope of controls, because part (b)(4) of the specially designed definition releases:

Was or is being developed with knowledge that it is or would be for use in or with both defense articles enumerated on the U.S. Munitions List and also commodities not on the U.S. Munitions List.



DRS Technologies, Inc.
Trade Compliance Office
2345 Crystal City Drive
10th Floor
Arlington, VA 22202

May 1, 2015

Mr. C. Edward Peartree
Director, Office of Defense Trade Controls Policy
Directorate of Defense Trade Controls
U.S. Department of State
Washington, DC 20522-0112

**Subject: Response to the Amendment to the International Traffic in Arms Regulations:
Revision of U.S. Munitions List Category VIII & XIX - 80 FR 11314**

Dear Mr. Peartree:

DRS Technologies, Inc. appreciates the opportunity to comment on revisions to the ITAR related to USML Category VIII, Aircraft and Associated Articles and USML Category XIX, Gas Turbine Engines and Associated Equipment. The final rule implemented in 2013 was a significant step in helping to achieve the Presidents published objectives regarding reforming the U.S. export control system. We do have several recommendations regarding the revised categories that we believe will help U.S. industry to compete in new commercial markets by only regulating defense articles, as well as changes to improve the clarity of the current lists.

1. VIII(a)(11) Aircraft incorporating any mission system controlled under this subchapter.

Our concern with this entry is regarding Note 1 to it that further identifies specific military functions of such a military system that would constitute control under this entry. Two functions, providing Military Communication and providing Sensor Capabilities could be, and in some cases are being interpreted rather broadly, which is a concern in application of this entry. Lacking further criteria, a single military radio installed on a commercial aircraft or a single infrared gimbal installed on helicopter appear to meet the criteria for control here. We recommend that Military Communications be replaced with Command and Control and that Sensor Capabilities be further refined to explain what types of sensors are included and what level such capability is required to achieve in order for the commercial aircraft to now be a defense article. Further, such military systems should be of such a degree that the commercial aircraft is able to perform a role substantially similar to that of the other aircraft enumerated elsewhere in VIII(a). Absent these clarifications this entry could drive the need for a technical assistance agreement to repair the lavatory or the requirement for Congressional notification of sale simply because a \$30K military radio is installed on a \$65M commercial aircraft, thereby making that aircraft a defense article.

2. VIII(a)(13) Optionally Piloted Vehicles (OPVs).

Our concern with this entry is that it states that ALL optionally piloted vehicles are defense articles. There is no requirement that such a vehicle be designed to perform a military mission or role of the piloted or unmanned vehicles enumerated elsewhere in category VIII, only that the vehicle be optionally piloted. The impact of this entry is that it essentially guarantees that the US industrial base will not participate in the development of commercial optionally piloted vehicles, meaning such commercial vehicles will be developed outside the U.S., without U.S. assistance. We strongly urge the Department to add positive criteria to this entry to limit its scope to only military optionally piloted vehicles, as it did with unmanned vehicles in VIII(a)(5).

3. VIII(h)(2) Face gear gearboxes, split-torque gearboxes, variable speed gearboxes, synchronization shafts, interconnecting drive shafts, or rotorcraft gearboxes with internal pitch line velocities exceeding 20,000 feet per minute and able to operate 30 minutes with loss of lubrication, and specially designed parts and components therefor.

Our first concern with this entry is that it controls all such items regardless of use on a military or commercial aircraft. The result of this is that it most likely will eliminate these items from being sourced from the US for use in any existing or future commercial aircraft simply because the US controls all such items as defense articles, not just those specific to a military aircraft controlled on the USML, whereas outside the U.S. such items would be controlled as commercial. We believe this does nothing to protect critical U.S. military technology and simply enables foreign industry to develop such items without any U.S. competition. As such, we urge the Department to delete this entry.

Our second concern is with the “interconnecting drive shafts” entry. The Department provided a ruling via General Correspondence (GC 3185-13, dated 10 March 2014) to a U.S. company that defined such drive shafts as being only those that connect the transmissions/gearboxes of tilt rotor aircraft and further that it does not include such interconnecting drive shafts as are on helicopters. By controlling ALL tilt rotor interconnecting drive shafts as defense articles the Department is needlessly prohibiting any possible development in the U.S. of a commercial tilt rotor aircraft. The implication of this is such commercial development will occur outside the US. We urge the department to delete this entry.

4. VIII(h)(13) Aircraft Lithium-ion batteries that provide greater than 38 VDC nominal.

In our comments to the 2011 initial proposed rule we urged the Department to delete this entry arguing such batteries are not uniquely military and should not be controlled as such. Since the publication of that final rule in 2013, the Department has had to raise the original threshold from 28 VDC to 38 VDC to avoid capturing existing greater than 28 VDC lithium-ion batteries on commercial aircraft. With the ever increasing power needs of commercial aviation, it is only a matter of time before commercial aircraft lithium-ion batteries exceed this revised 38 VDC threshold. As such, we again urge the Department to delete this entry. Producing electricity from such a lithium-ion battery is not a military

application nor is it a unique military capability such that it would warrant control under this subchapter. An additional consideration is that if such batteries that the Department is attempting to capture here are for any of the special aircraft identified in VIII(a), such batteries would appear to be captured under VIII(h)(1), further obviating the need for this entry.

5. XIX(b), Turboshaft and Turboprop engines capable of 1500 mechanical shp (1119W) or greater and are specially designed with oil sump sealing when the engine is in the vertical position.

Such oil sump sealing engines as are defined above are for Tilt Rotor aircraft. This entry, coupled with VIII(h)(2) which controls all tilt rotor aircraft interconnecting drive shafts (see item 3 above), results in any tilt rotor aircraft developed in the US being controlled as a defense article, even one developed for purely commercial purposes. The implication is such commercial tilt rotor aircraft will be developed outside the U.S., without the participation of the U.S. industrial base. There are such aircraft and such components with unique military abilities that warrant control under this subchapter. We do not believe though that all tilt rotor aircraft and components should be so controlled. We urge the department to specify the unique military-only criteria that would warrant control in these entries or to delete these entries completely.

We applaud the Department on the work it has done to date reforming the U.S. export control system. We firmly believe these changes will significantly help to better protect U.S. national security and U.S. economic security. As with the situation regarding commercial satellites identified in the joint DoD/State 1248 report to the Congress, much of the above is either already available outside the U.S. or the capacity for development exists outside the U.S., where it is regulated as commercial. As with the commercial satellite situation, applying more stringent export controls here places the U.S. industrial base at a distinct disadvantage while doing nothing to protect the technological advances that are critical to our warfighters. We hope the Department will seriously consider our above recommendations.

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Gregory C. Hill', written in a cursive style.

Gregory C. Hill
Vice President
Global Trade Compliance
DRS Technologies, Inc.

www.regulations.gov

DDTCPublicComments@state.gov

Docket Number DOS-2014-0030

Subject: Comments Regarding Review of USML Category VIII & XIX on behalf of Eaton US Holdings, Inc.

Prepared by: Ethan Maretich, Product Compliance Manager, Aerospace Group, Eaton US Holdings, Inc.

Directorate of Defense Trade Controls

These comments, submitted on behalf of Eaton US Holdings, Inc., are in response to the Notice of Inquiry, 80 FR 11314, and address Prompt #4. Comment #5 addresses the “specially designed” definition, which is used throughout USML Category VIII. Consideration of these comments is greatly appreciated.

Comments, Concerns, and Recommendations for USML Category VIII:

1. With regards to the *Note 3 to Paragraph (f)*, it is recommended that the text be changed to add clarification to the time period under consideration in determining applicability of contracts and funding authorizations. The recommendation is to change the last word, “later,” to “after.” Intuitively, it is logical that the applicable time period is from April 16th to the present with regards to aircraft under development. However the word, “later,” is misleading in that it has meanings for both in the past and in the future. Making this change, the updated Note 3 would read as follows (red text is proposed update):

"Note 3 to paragraph (f): This provision is applicable to those contracts or other funding authorizations that are dated April 16, 2014, or **after**."

In addition, are contracts dated prior to April 16, 2014 to be included in USML Category VIII(f) that may have amendments made to them after April 16, 2014? We seek clarifying language to address this situation.

2. With regards to the *Note to Paragraph (h)(1)*, it is recommended that the text be changed to add clarification to make clear that “specially designed” parts common to aircraft enumerated in VIII(h)(1), as well as aircraft on the ITAR (i.e. in VIII(a)), should not be classified under VIII(h)(1), but still could be found on the ITAR, if sub-paragraphs VIII(h)(2) – VIII(h)(26) are applicable. VIII(h)(1) aircraft (red text is proposed update):

"For example, a part common to only the F-14 and F-35 is not specially designed **in paragraph (h)(1)** for purposes of the ITAR - **unless this part is "specially designed" elsewhere in paragraph (h) of this category, it is subject to the EAR**. A part common to only the F-22 and F-35—two aircraft models identified in paragraph (h)(1)—is specially designed **in paragraph (h)(1) for purposes of the ITAR**."

As an example, consider aerial refueling parts and components that are common to both the F-16 and F-35. While the parts would not be captured in USML Category VIII(h)(1) because the parts and components are common to aircraft enumerated in USML Category VIII(h)(1) (F-35), as well as aircraft not in enumerated in USML Category VIII(h)(1) (F-16), they **should** be captured in USML Category VIII(h)(1).

3. With regards to USML VIII(h)(2), the current sub-paragraph is stated as follows:
"(2) Face gear gearboxes, split-torque gearboxes, variable speed gearboxes, synchronization shafts, interconnecting drive shafts, or rotorcraft gearboxes with internal pitch line velocities exceeding 20,000 feet per minute and able to operate 30 minutes with loss of lubrication, and specially designed parts and components therefor;"

We request the gearbox locations be specified in more detail. We gained recent understanding through a Commodity Jurisdiction (CJ 0040-15) that intermediate and tail gearboxes (and “specially designed” parts and components therefor) are not included in this sub-paragraph, but that is not clear in the regulations based on how the sub-paragraph is currently written.

4. Over-use of "...and specially designed parts and components therefor."

April 30, 2015

The catch-all phrase -- "...and specially designed parts and components therefor" -- is used in 8 of the current 26 subparagraphs of VIII(h): VIII (h) (2), (3), (4), (5), (6), (11), (14), and (15). If possible to further enumerate what parts and components are to be controlled, it is recommended to do so, as we believe there are parts and components produced that might in fact be "specially designed," but do not necessarily warrant control under the ITAR because no significant military advantage can be gained from this technology/product. However, EAR 9A610.x serves its intended purpose for those "specially designed" parts and components that are not enumerated or included in systems enumerated in USML Category VIII, or described elsewhere in ECCN 9A610.

5. "Specially designed" definition (a)(1) catch statement.

For this catch statement, it is recommended that an FAQ or similar attachment be added to the definition to address what could possibly be "caught" by this statement. During the BIS Update Conference in Washington, D.C., in July 2014, it was explained that the intent of that statement is targeted for materials/raw materials and end items. In addition to that, the (a)(1) catch statement could also catch any part, component, accessory, attachment, or software that has properties peculiarly responsible for achieving or exceeding the performance levels called out in the applicable USML or CCL paragraph. For instance, if a new part is developed, and it has properties peculiarly responsible for achieving or exceeding the necessary performance levels called out by the applicable USML paragraph, but was not developed for use in or with a defense article, it would be caught by the (a)(1) catch statement. However, it is not abundantly clear that this statement should catch the part. Of course, when the release statements are reviewed, it would most likely be released under a (b)(4) or (b)(5) release statement.

Sincerely,

A handwritten signature in black ink that reads "Ethan Maretich". The signature is written in a cursive, flowing style.

Ethan Maretich
Product Compliance Manager, Aerospace Group
Eaton US Holdings, Inc.



Operating under the joint auspices of:



**c/o ADS
"ShowCentre"
ETPS Road
Farnborough
Hampshire GU14 6FD
United Kingdom**

**Tel: +44 20 7091 7822
Fax: +44 20 7091 4545
E-Mail: Brinley.Salzmänn@adsgroup.org.uk
URL: www.egad.org.uk**

1 May 2015

C. Edward Peartree
Director, Office of Defense Trade Controls Policy
U.S. Department of State
PM/DDTC, SA-1, 12th Floor
2401 E Street, NW
Washington, DC 20037
United States of America
DDTCTPublicComments@state.gov

Re: Review of USML Categories VIII and XIX

Dear Mr Peartree,

I write to you on behalf of the Export Group for Aerospace and Defence (EGAD), which is a not-for-profit making special interest industry group, focusing exclusively on all aspects of export and trade control compliance matters, and is the only dedicated national industrial body in the UK dealing exclusively with export and trade control issues. EGAD operates under the joint auspices of the ADS Group Ltd (ADS), the British Marine Federation (BMF), the British Naval Equipment Association (BNEA), the Society of Maritime Industries (SMI), and TechUK.

This is in response to the consultations which were launched by the US Government on Monday 2nd March 2015, seeking comments on practical experiences with the transfers of Categories VIII and XIX from the International Traffic in Arms Regulations (ITAR) to the Export Administration Regulations (EAR), under the on-going US Export Control Reform (ECR) process.

On behalf of UK Industry we would like to submit the following general and generic comments and observations to you, for your consideration, to add to the no doubt much more detailed and insightful, practical responses that we are sure will also be submitted by individual companies.

First of all, we would like to state that UK Industry in general is hugely supportive of any and all efforts and initiatives to try to address the widely-held perceptions of the bureaucratic impediments that have resulted in the need for an ECR, in the US, to try to make the US export control system simpler and bureaucratically easier, whilst not creating unanticipated and unwelcome opportunities for potential proliferators. We have been unequivocal in our support for the ECR initiative, and remain committed to try to do all that we can to make it work and succeed.

We are enormously grateful for the high degree of constructive engagement, willingness to enter into open discussions and debate, and assistance that the US Government has unfailingly demonstrated on ECR, which have been hugely beneficial, in our view, and has invariably demonstrated considerable professionalism and commitment on the part of its officials.

That being said, it is very widely agreed within UK Industry that there are all-too-often highly divergent and sometimes completely contradictory and inconsistent differences of opinion on the control list classifications of items now coming out of companies based in the US, as a direct result of ECR. This is highly confusing for the UK companies involved, and with uncertainty and confusion often comes an innate desire to try to avoid having to deal with it (eg by sourcing from elsewhere), or greater risks of inadvertent non-compliance taking place. It is essential that any UK firms faced with such different opinions seek sight from the US firms involved of how they had worked out what the new, post-ECR classification of their items are, as this then enables them to ascertain if the US firm had made a mistake in its workings. This has also exposed previous instances where US parties have misclassified systems and technology, where, in the past, this really did not matter very much in the overall scheme of things, as it was all regarded as being ITAR, but which now, in the post-ECR World, such misclassifications actually have quite significant practical implications.

The fundamental aim of ECR, as we understood it, had been to provide greater clarity and certainty, but, sadly, we believe that the opposite may very well now be the case. As already stated above, it is clear that senior staff within the US Government are desperately keen and willing to help, and to get ECR to work, but UK (and, more importantly, US) companies are seemingly having very mixed experiences with ECR at the practical implementation level. There can all-too-often be much confusion and, all-in-all, the situation is widely regarded as being extremely "challenging".

We believe that there is a host of unintended consequences which are taking place, many of which are proving to be real challenges, especially for the large UK prime contractors. What Industry (both US and overseas) had sought was a simplification of the previous ITAR, rather than complying with this new, and in many ways even more complex, legislative and regulatory regime. For this to work smoothly, UK companies have to be dealing to US suppliers and partners who are fully up-to-date, knowledgeable and well-informed on US export control issues, and are open, constructive and transparent in what they are doing; whilst there are some such US firms, sadly, they are not all like that, and problems then invariably result for the UK parties involved. As just one example, we know of at least one non-US company, involved in the aerospace sector, which had contacted some eighty (80) US-based suppliers in its supply chain, in October 2013, to ask them what the impact of ECR was on what they supplied to them; a year later, only some seven (7) of these US-based suppliers had responded to this request with the required information.

In our view, the provision of additional training is needed, both in the US, as well as elsewhere, prior to the 15th October 2015 deadline to the transition period for former Category VIII and XIX items of technology. We are very well aware of the great efforts that the US Government has already put into trying to achieve this, but feel that more needs to be done to make ECR the success that it deserves to be.

We are confident that individual firms will have submitted details of their own practical experiences of the specific issues and queries that they have had to face, where clarification would be invaluable, in their own responses to this consultation, so we will not seek to replicate these detailed inputs. One query which we understand is still outstanding, despite being posed to the US Government by a number of UK firms, relates to the control of "derived data", which is seemingly controlled under the "600-series" controls, whilst it is not under the rest of the EAR.

The whole subject of "Defense Services", as they pertain to 600-series items and technology, including technology which had been covered by Categories VIII and XIX but has been transferred to EAR, remains highly confusing and extremely unclear; in our view much greater clarity on this would be enormously helpful.

With the 15th October 2015 deadline to the transition period for former Category VIII and XIX items of technology fast approaching, we can only hope that as many US firms as possible have taken full advantage of this two-year transition period to try to sort out their licensing affairs.

Thank you in advance for your consideration of these comments. If you have any questions about this correspondence please contact me.

Regards


Brinley Salzmänn - Secretary, EGAD



Garmin International, Inc.
1200 East 151st Street
Olathe, Kansas 66062
P: 913-397-8200 F: 913-397-8282

May 1, 2015

SUBMITTED VIA EMAIL TO: DDTCPUBLICCOMMENTS@STATE.GOV

Mr. C. Edward Peartree
Director
Office of Defense Trade Controls Policy
Department of State
2401 E Street NW, SA-1, Room H1200
Washington, D.C. 20037

RE: Request for Comments Regarding Review of Categories VIII and XIX
(80 FR 11314, dated March 2, 2015)

Dear Mr. Peartree:

On behalf of Garmin International, Inc. (“Garmin”), we are pleased to provide these comments responding to the Request for Comments Regarding Review of U.S. Munitions List (“USML”) Categories VIII and XIX, administered by the Directorate of Defense Trade Controls (“DDTC”).

Garmin believes that Category VIII(e) has operated well. We believe that Category XII should not be amended to provide an enumerated clause that describes gyros, AHRS, or INS that operate at defined performance parameters. The catch and release provisions for gyroscopes, AHRS, and INS better achieve the goals of Export Controls Reform to exclude from the USML items in normal commercial use over time.

Catch and Release Provisions of VIII(e)

We appreciate the strategy of DDTC periodically to review Category VIII, and Garmin understands the general preference of DDTC and the Administration to use enumerated performance criteria where possible. However, there are reasons this policy-making strategy is not the better alternative when compared to the catch and release provisions of Category VIII(e). In anticipation of publication of a revised Category XII, Garmin is gathering information regarding common commercial use of gyroscopes, AHRS, and INS equipment and will comment further on Category XII when it is published.



Mr. C. Edward Peartree
May 1, 2015
Page 2

Recommendation

Garmin believes AHRS, INS, and gyros should remain subject only to a catch-all clause under the USML. Category XII should not be amended to provide an enumerated clause that describes gyroscopes, AHRS, or INS that operate at defined performance parameters. The catch and release provisions better achieve the goals of Export Controls Reform to exclude from the USML items in normal commercial use over time. Commercial avionics has and will continue to evolve quickly to improve safety and efficiency of commercial flight.

Sincerely,

John Preis
Manager, International Trade Compliance



GE Aviation

Robert J. Lawson

Sr. Business Manager – GE Aviation
International Trade Compliance

1 Neumann Way
Cincinnati OH, 45215
USA

T 513-243-4282
rob.lawson@ge.com

U.S. Department of State
Office of Defense Trade Controls Policy
PM/DDTC, SA-1. 12th Floor
2401 E Street, NW, (SA-1)
Washington, D.C. 20037

Regulatory Policy Division
Bureau of Industry and Security
Room 2099B
US Department of Commerce
Washington DC 20230

April 29, 2015

Subject: Response to Notice of Inquiries in Federal Register Vol 80, No. 40, March 2, 2015:
Department of State Public Notice 9050
Department of Commerce RIN 0694-XC023

The General Electric Company submits the following comments regarding Controls on Military Aircraft and Military Gas Turbine Engines in USML Categories VIII and XIX, as well as CCL category 600. The current reforms have been of significant value to General Electric, and represent a positive step forward in focusing export controls on items of greater technical significance. GE believes continued efforts to move items of lesser technical significance to categories of lesser controls will improve US industrial competitiveness and efficiency, and lower current barriers to participation in international aviation programs.

The following items are suggested clarifications and improvements related to Export Control Reform changes in Categories 9A619 and 121.1 category XIX and VIII.

Minor Components:

There are several opportunities to clarify ambiguities in the current ITAR/EAR language around the control of minor components, as well as opportunities to modify and expand the list to simplify the export of minor parts of engines and aircraft. Suggestions include:

Expand (b)(2) Release:

For those few items which could qualify to be included in .y entries across all categories, adding them to the (b)(2) release could efficiently release them from both the ITAR and EAR licensing requirements. Examples might include clamps, tubes, and brackets.

Shims vs Spacers:

9A691.y.6 captures shims, yet the 'specially designed' (b)(2) definition releases all spacers. It is unclear how industry would differentiate a shim from a spacer, and what technical reasoning would treat them differently.

Clamps:

9A619.y.5 lists 4 specific types of clamps, but there are other generic clamps that are equally minor, for example 'half-clamps', which hold tubes down against a structure. GE suggests the language be modified to more broadly list clamps.

Oil and fuel lines:

9A619.y.2 captures Oil lines and tubes

9A619.y.3 captures Fuel lines and hoses

It's unclear what differentiates a tube from a hose, or why it would be important to differentiate fuel transfer from oil transfer functions (or any other fluid). It would simplify classification of items to combine these categories into a single group, and specifically include the fittings and adapters common to these items.

Air lines:

9A619.y.8 captures Air, fuel, and oil manifolds, but air lines are not released like oil and fuel lines in y.2 or y.3 above. Air lines should be included in the categorization above. A single category for all three would simplify classification and exports.

Brackets:

Brackets whose primary construction is sheet metal and whose function is to position and support wiring, oil, fuel, or air lines, or engine accessories should be included in specially designed (b)(2). Brackets are essentially fasteners, connecting an item to another item.

Cables and harnesses:

General wiring harnesses are the electrical equivalent of fuel and oil lines – they transfer electrical signals between sensors and components, with no signal processing, and have no military functionality. They should also be released to 9A619.y or preferably identified in specially designed (b)(2) release.

Minor Components of 19.f.1 listed engines:

Items caught in 19.f.1 but described in 'y' are not currently released from 19.f.1 controls. Modifying the 19.f.1 control to carve out items identified in 9A619.y would complete the release of many low level parts. There are currently suppliers whose products meet the definitions to release parts to 9A619.y, but are still ITAR controlled because of unique use on 19.f.1 listed engines.

T700 Engine Line

It is unclear why the T700 engine has been singled out for inclusion on the USML given similarity to its CT7 commercial variant. The original T700/CT7 model, designated the T700-GE-700, was developed in the 1970's and entered production in 1978. The CT7-1 was the very first T700/CT7 engine certified by the FAA for commercial use in 1977. Since then, GE has developed over 25 different models used on both rotary and fixed-wing aircraft for over 130 customers in over 50 countries.

The T700 turboshaft and CT7 turboshaft and turboprop engines form a family of engines where there are no significant differences between the military and commercial models. All T700 and CT7 engines have the identical architecture of a 5-stage axial compressor, a 1-stage centrifugal compressor, a 2-stage cooled high pressure turbine, and a 2-stage uncooled low pressure turbine. The entire family also shares identical bearing and lubrication systems and a top mounted accessory module.

There are no significant hardware differences between military T700 and CT7 engines, and none of the minor differences that do exist have anything to do with commercial versus military functionality. In fact, over the last 20 years, product advancements are typically introduced for the CT7 engine and leveraged for use on the T700. For example, the current engine for the UH-60M Black Hawk helicopter, the T700-GE-701D, owes most of its power and durability improvements over its predecessor T700-GE-701C to hardware developed for the commercial CT7-8 engine. Moreover, the most recent T700 model developed for the Special Operations MH-60M helicopter, was derived from and is almost identical to, the commercial CT7-8A engine that powers Sikorsky's S-92 commercial helicopter.

GE recommends the T700 engine be released from the XIX.d listing, and recommends the XIX.d listing be focused on specific performance features of military significance.

F101 and F118 engine lines

The F101 and F118 engines were the initial basis for the latter F110 engine. While these engines power the B-1B and B-2 aircraft (which are captured in 8.h.1), there are no unique features of or technologies within these engines that warrant control in 19.f.1 that would otherwise not be captured in other ITAR categories, such as 19.f.2-6 or 13.j. Many individual components are common to all three engines, and often a drawing will contain an early version of an individual part, that while no longer in production, is unique to an early F101 model, causing the entire drawing to be caught in 19.g, rather than, for example, 9E619.a.

GE requests the USG consider releasing these engines from the 19.f.1 listing.

Augmentor and nozzle parts

The ITAR currently captures cooled augmentors in 19.f.2, but does not identify individual parts of these components. Other ITAR categories identify both components and parts (eg. 19.f.1 and 19.f.6). The EAR identifies technology for many augmentor parts within 9E619.b.7. The 2 regulations are written at different levels of detail. Neither the ITAR nor the EAR specifically identifies these augmentor parts in hardware categories. GE recommends that augmentor parts be explicitly captured in 9A619 consistent with 9E619.

Controls technology for 9A619.a engines

For commercial engines, approximately 75% of the FADEC control technology is NLR, leaving a focused list of specific technologies of importance in categories 9E003.h.1-3. Military engines described in 9A619.a place FADEC controls technology in 9E619.c.6, which broadly encompasses some of the same general technology that is NLR on commercial engines. Whereas the 9A619.a engines are generally older technology engines or commercial engine derivatives, the 9E619.c.6 category is capturing technology generally available without license on commercial engines. GE recommends modification of 9E619.c.6 to better parallel the controls in 9E003.h.

GE appreciates the United States Governments efforts to focus export control regulations on the critical items important to national security, while simplifying export requirements on less critical items. US industrial competitiveness, as well as international acceptance of our products, is significantly impacted by these regulations, and we appreciate the ability to participate in further improvements going forward.

For questions concerning this request, please contact the undersigned at (513) 243-4282 or by e-mail at: rob.lawson@ge.com.

Sincerely,

Robert J. Lawson
Sr. Business Manager - Aviation
International Trade Compliance



May 1, 2015

Submitted electronically to DDTCTPublicComments@state.gov

Subject: Public Comment on USML Category VIII(h)(15)

Directorate of Defense Trade Controls
U.S. Department of State

Gentex Corporation submits the following comments in response to the March 2, 2015 notice of "Request for Comments Regarding Review of United States Munitions List Categories VIII and XIX." Gentex would like to comment specifically on language in USML Category VIII(h)(15).

On April 16, 2013, the Department of State published Federal Register Vol. 78, No. 73. It included the final language of USML Category VIII(h)(15) as follows:

(15) Integrated helmets incorporating optical sights or slewing devices, which include the ability to aim, launch, track, or manage munitions (e.g., Helmet Mounted Cueing Systems, Joint Helmet Mounted Cueing Systems (JHMCS), Helmet Mounted Displays, Display and Sight Helmets (DASH))

On October 10, 2014 the Department of State published a correction rule in Federal Register Vol. 79, No. 197 adding specially designed parts, components, accessories, and attachments to VIII(h)(15). It now reads:

(15) Integrated helmets incorporating optical sights or slewing devices, which include the ability to aim, launch, track, or manage munitions (e.g., Helmet Mounted Cueing Systems, Joint Helmet Mounted Cueing Systems (JHMCS), Helmet Mounted Displays, Display and Sight Helmets (DASH)) and specially designed parts, components, accessories, and attachments therefor.

Gentex does not object to the original USML Category VIII(h)(15) language in the April 16, 2013 Federal Register describing integrated helmets. We understand that the State Department wants to retain control of the components, products and technology that allow the pilot to aim, launch, track or manage munitions.

A stated goal of export reform was to create a more positive control list. In the October 10, 2014 correction rule, the addition of the language "specially designed" creates a catch-all category and we believe may cause the USML to unintentionally control many parts of integrated helmets that do not contribute to nor enhance the capability of the cueing system and do not control the ability

to aim, launch, track and manage munitions and therefore do not warrant control under the ITAR.

Under the “specially designed” definition in the ITAR, parts, components, accessories and attachments for use with the defense article are initially “caught.” Assuming none of the other criteria of the specially designed definition are met, the parts and products are “released” if the product has the same function, performance capabilities, and the same or “equivalent” form and fit as a commodity or software used in or with a commodity that is or was in production and is not enumerated on the U.S. Munitions List.

The addition of the “specially designed” language means that helmet shells, helmet parts and helmet accessories which are designed or modified to be merely compatible with cueing systems, even if such helmet products have the same function and performance capabilities as standard military aircrew helmet products but not the same or equivalent form and fit, are now classified as USML Cat. VIII(h)(15). Standard military aircrew helmet products are controlled by ECCN 9A610 of the CCL. Gentex does not currently manufacture optical sights and slewing devices, however, Gentex does manufacture military aircrew helmet products, helmet accessories and helmet parts which are intended to be used in helmets with optical sights and slewing devices (“integrated helmets”). The form of these integrated helmet products may vary from standard aircrew helmet parts due to: different material composition requirements to accommodate differing aircraft configurations; differing acoustic requirements based on the size of the aircraft cockpit; differing configurations of components for general improvement reasons; and different configurations to accommodate an optical sight or slewing device. However, none of the helmet products that are designed for use with an integrated helmet, even if it is to accommodate a particular optical sight or slewing device, contribute in and of itself to the functionality or effectiveness of the optical sight or slewing system. In fact, these integrated helmet products have the same function and performance capabilities as standard aircrew helmet products. We understand that the intent of the Department of State was to control the optical sight and slewing devices. We believe that the “specially designed” language as proposed unintentionally captures military aircrew helmet products that have standard aircrew helmet performance characteristics, but that have been designed or modified for use with an integrated helmet that incorporates an optical sight or slewing device. The design or modification of these products does not contribute to the performance, efficacy or function of the optical sight or slewing device nor do they contribute to the ability to aim, launch, track, or manage munitions.

Therefore, we propose rewording USML Cat. VIII(h)(15) as follows:

(15) Integrated helmets incorporating optical sights or slewing devices, which include the ability to aim, launch, track, or manage munitions (e.g., Helmet Mounted Cueing Systems, Joint Helmet Mounted Cueing Systems (JHMCS), Helmet Mounted Displays, Display and Sight Helmets (DASH)), and specially designed electronic and optical parts, components and accessories for the optical sights or slewing device of the integrated helmet.

Sincerely,

GENTEX CORPORATION



Heather M. Acker

Executive Vice President and Chief Financial Officer

Request for Comments Regarding Review of the United States Munition List Category VIII and XIX

Public Notice 9050

To the Attention of DDTCpubliccomments@state.gov

The German Aerospace Industries Association (**BDLI**) with more than 220 members represents the interests of an industrial sector, which owing to international technology leadership and worldwide success has become a significant driver of economic growth in Germany. Combining almost all strategic key technologies, the German aerospace industry with a directly employed labor force of around 105,700, achieves an annual turnover of currently Euro 32.1 billion.

Communication with political institutions, authorities, associations and foreign representations in Germany is a major task of the BDLI, as well as a variety of services in Germany and abroad for its members. The BDLI is trade owner of the ILA Berlin Air Show International Aerospace Exhibition.

The BDLI is officially accredited to the German Bundestag where it performs specific, legally embodied tasks. The BDLI is a member of the European umbrella organization ASD, AeroSpace and Defence Industries Association of Europe, and the Federation of German Industries (BDI).

Please receive these comments that are submitted by the BDLI, on behalf of its member companies.

BDLI strongly underlines its respect for the efforts undertaken by the relevant administrative bodies, i.e. the Department of State, the Department of Defense, the Department of Commerce on the Export Control Reform with particular regard to U.S.M.L Cat VIII and Cat XIX.

Classification of Foreign-origin Aircraft Cat VIII (a) (15) (ii):

Category VIII (a) (15) (ii) capture Foreign-origin aircraft which are specially designed to provide functions equivalent to aircraft listed in paragraph VIII (a) (15) (i). However, non-U.S. military aircraft manufacturers are not familiar with the military designations listed in USML Category VIII (a) (15) (i), and still less with functionalities and performances of the corresponding aircrafts. We suggest that the ITAR provides a definition of the functionalities captured under this paragraph, either by adding a note to paragraph (a), or by modifying the language of paragraph VIII (a) (15) (ii) as follows:

<u>Note to paragraph (a)</u>

Note (3) to paragraph (a): US Military Designations identified in (15) (ii) are as per US Air Force instruction 16-401(I). or

Note (3) to paragraph (a): U.S. Military Designations are as follows: A Attack, B Bomber, E Special Electronic Installation, F Fighter, K Tanker, M Multi-mission, P Patrol, R Reconnaissance, or S Anti-submarine

Or change of language to paragraph VIII (a) (15) to read

(ii) Foreign-origin aircraft specially designed to provide functions equivalent to those of aircraft listed in paragraph ~~(a) (15) (i)~~ (a) (1) to (a) (14) and (a) (16) of this category

Reclassification of prior VIII (h) articles:

As a foreign recipient of U.S. military items, BDLI member companies have come across plenty of examples where the U.S. supplier has reclassified a former Category VIII (h) part or component to another USML category. Moreover, the item was reclassified to the sub-paragraph identifying the *end-item* in the USML category and not the sub-paragraph identifying the *system* the item is incorporated in. After some involved discussions with U.S. suppliers, it becomes obvious that many U.S. companies do not fully understand the “new order of review” and the “specially designed” process. This has caused delays in the production process and final delivery. Indeed, BDLI member companies cannot move on certain re-exports without an accurate U.S. export classification. In order to match the EAR, it is BDLI member companies’ recommendation that the ITAR include a defined “Order of Review” in ITAR §121, similar to Supplement No. 4 to Part 774 of the EAR.

In addition to the current DDTC on-line tool related to “order of review”, such regulatory definition would provide better guidance on how to classify items on the USML and whether the item is “specially designed”. For example:

An End-item, system, or part or component is considered a Defense Articles if:

- a) It is positively listed/enumerated in a USML Category sub-paragraph, OR*
- b) It is captured by a USML category / sub-category “catch-all” control and is “specially designed”, as defined in 120.41.*

Conversely, if a part or component is not positively listed and is not captured by a “specially designed” clause, then it is not controlled under the USML.

Employment of U.S. person outside of the U.S. :

BDLI member companies employ a large number of U.S. citizens that may have access to 600 series and Category VIII and Category XIX items.

The definition of Defense Services in paragraph 120.9 (a) (1) catches the furnishing of assistance without distinguishing whether this assistance is technical in nature or not. If a foreign company employs a U.S. scheduler or U.S. accountant, or a U.S. translator, in a production plant of a foreign military aircraft, he could be deemed as giving a Defense Service for "furnishing assistance to the production of a foreign Defense Article" to a foreign person.

We also believe that the requirements for licensing the provision of Defense Services by U.S. persons employed by foreign person should be limited to "assistance" which is technical in nature and when the technical know-how is of U.S. origin.

We suggest making clearer the exclusion to Defense Services by qualifying the nature of the assistance in the definition of Defense Services and by adding a clarification note to 120.9 (b) 2 as follows:

§ 120.9 Defense Service

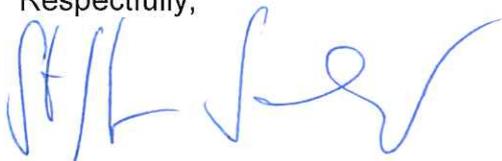
(a)

(2) The furnishing of technical assistance to a foreign person, whether in the United States or abroad, for the integration of any item controlled on the U.S. Munitions List (USML) (see § 121.1 of this subchapter) or items subject.....

Note to § 120.9 (a): A U.S. person employed by a foreign person is not providing a Defense Service if this employee is not providing assistance derived from U.S.-origin Defense Articles controlled on the U.S. Munitions List (USML).

For further detailed information, please contact Steffen Schwarzer, Manager Defence and Space, BDLI, via telephone at +49 30 206140-44 or via email at schwarzer@bdli.de

Respectfully,





Gerald Musarra
Vice President
Government & Regulatory Affairs

May 1, 2015

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

Mr. Edward Peartree
Director, Office of Defense Trade Controls Policy
Directorate of Defense Trade Controls
U.S. Department of State
Washington, D.C.

Re: Review of United States Munitions List (USML) Categories VIII and XIX (DOS-2014-0030)

Lockheed Martin Corporation (Lockheed Martin) is pleased to submit the following comments in response to the March 2, 2015 notice of inquiry regarding USML Categories VIII and XIX. Lockheed Martin commends the Departments of State and Commerce for their commitment to conducting periodic reviews of the USML categories that have recently been revised as part of the President's Export Control Reform (ECR) initiative. As noted in the request for comments, the control lists should be "revised and updated to account for technological developments, practical application issues identified by exporters, and changes in the military and commercial applications of items affected by the list." Regular comprehensive reviews of the control list categories will greatly help to ensure these objectives are met.

In particular, the Department has asked for comments on several subjects, including: defense articles that are described in the control text, but which have entered into normal commercial use since the most recent revisions to the category; and defense articles for which commercial use is proposed, intended, or anticipated in the next five years. With this in mind, Lockheed Martin has identified several control parameters in Category VIII that warrant further review and revision.

Specifically, Lockheed Martin is providing recommendations for modifying controls on military airlift aircraft (Category VIII(a)(14)) and certain parts and components integrated into aircraft controlled by Commerce Export Control Classification Number (ECCN) 9A610 (Category VIII(e) and (h)(10)&(17)). Recommendations are intended to address two issues:

- (1) Correcting the inadvertent and unanticipated control of legacy Lockheed Martin L-100 aircraft on the USML. These aircraft have been in commercial service and controlled under the jurisdiction of the Department of Commerce for decades. Clearly, the intent of the ECR initiative was not to impose greater export controls on these non-military aircraft; and

- (2) Transferring control of commercial transport aircraft under development, such as the LM-100J, to the Commerce Control List (CCL). The LM-100J is developed for civil/commercial use, and is a good example of the type of commercial innovation and investment that export control list reform was intended to encourage. The LM-100J is readily distinguishable from the C-130J, which is the military variant of the same basic platform.

These proposed changes to Category VIII would improve the efficacy of U.S. export controls and help accomplish the stated objectives of ECR, including improving U.S. competitiveness abroad – which strengthens international partnerships, increases interoperability, sustains the U.S. industrial base, and lowers costs for U.S. systems – and enabling the U.S. government to focus limited export control resources on transactions that pose greater concern.

I. UMSL Category VIII(a)(14): Military Airlift

Under the current Category VIII(a)(14), “aircraft with a roll-on/roll-off ramp, capable of airlifting payloads over 35,000 lbs. to ranges over 2,000 nm without being refueled in-flight, and landing onto short or unimproved airfields” are deemed to be military aircraft worthy of control as defense articles. However, Lockheed Martin does not consider these capabilities – which are inherent to existing commercial aircraft and important for many commercial/civil applications – to be suitable criteria for controlling a critical military capability on the USML.

As noted in the Department’s request for comments, when revisions to Category VIII entered into force in 2013, “With limited exceptions, the defense articles that warranted control on the USML were those that provided the United States with a critical military or intelligence advantage. All other items were to become subject to the Export Administration Regulations [EAR].” However, the broad criteria used in Category VIII(a)(14) do not define a capability that provides such a critical advantage. As described in greater detail below, many U.S. and foreign aircraft have the capability to operate in austere environments within the range-payload parameters identified in Category VIII(a)(14). Moreover, the current USML criteria inadvertently capture existing commercial aircraft, such as the legacy Lockheed Martin L-100 aircraft, that have been controlled on under the jurisdiction of the Department of Commerce for decades.

It is our understanding that the intent of Category VIII(a)(14) was to ensure that certain military platforms, such as the C-130J Super Hercules, which provides tactical airlift capability to the U.S. Air Force, remained on the USML. The C-130J is the most flexible airlifter in the world – a proven, highly reliable and affordable airlifter that has been selected by 15 nations around the globe. Although the C-130J can satisfy many civil and commercial mission requirements – including firefighting, medical, humanitarian and disaster relief functions – Lockheed Martin does not recommend that the C-130J be removed from the USML. Instead, USML control parameters should recognize that what makes the C-130J – and similar military tactical airlift platforms – a sophisticated piece of military equipment is not its inherent flight/performance capabilities, but rather the military systems integrated into the aircraft which enable it to perform effectively in combat/military environments. When these military capabilities are removed from the aircraft, the airplane becomes similar to other commercial aircraft competing in the

international marketplace. Accordingly, Category VIII controls should ensure that existing and future commercial aircraft that do not provide a critical military advantage are not inadvertently controlled as defense articles.

Legacy L-100 Aircraft Controlled as Commercial Aircraft

Most L-100 currently in use are more than 23 years old. Originally designed and developed in the 1960s as a civil variant of the C-130, Lockheed Martin manufactured and sold versions of the L-100 until 1993. Over time, structural fatigue has limited the operational capability of the aircraft, reducing the range and flight characteristics. However, even with this reduced capability, Lockheed Martin has determined that the legacy L-100 aircraft are “capable of” airlifting a payload over 35,000 lbs over 2,000 nm. (Note: The range of the L-100 aircraft as delivered exceeded 2,800 nm for all models.) Current operators of the L-100 aircraft confirm that the actual range performance of existing aircraft exceeds the 2,000 nm threshold, without reserves.

Yet, the L-100 has been subject to the jurisdictional controls of the Department of Commerce’s EAR since its civil FAA certification in 1965. All L-100-type aircraft have been sold internationally as commercial aircraft. The Department of State confirmed the Commerce jurisdiction for the overall L-100 aircraft as recently as 2006 and posted public guidance confirming this interpretation until 2013. Lockheed Martin knows of no compelling national security reason to change this policy.

A change in jurisdiction would unnecessarily complicate export licensing and compliance requirements for U.S. exporters supporting the 50+ L-100 aircraft operating globally. Revisions to Category VIII(a)(14) were intended to provide objective parameters of control for tactical military airlift platforms, not capture aircraft already controlled as commercial items – particularly for aircraft that have little, if any, military utility. As commercial aircraft technology continues to advance and the need/ability for aircraft to operate in non-traditional environments (*e.g.*, short and/or unimproved runways) expands, the control parameters outlined in Category VIII(a)(14) may inadvertently control other civilian aircraft in existence or development – including Lockheed Martin’s LM-100J – not suitable for military missions.

The current Category VIII(a)(14) control parameters frustrate the ability for current L-100 operators to continue commercial business operations and inhibit U.S. parts and component suppliers’ ability to support these aircraft. As stated in the notice of inquiry, the advantage of a “more positive” USML is that controls can be targeted to satisfy national security objectives “without inadvertently controlling items in normal commercial use.” There is no doubt that the L-100 aircraft have been in normal commercial use for decades. Category VIII(a)(14) should therefore be revised to rectify this unforeseen outcome of the list reform effort.

LM-100J – The Next Generation of Commercial Transport Aircraft

Lockheed Martin has developed a new civil variant of the C-130. The LM-100J will leverage the same technological investment that went into updating the C-130J to reduce manpower

requirements, lower operating and support costs, and provide life-cycle cost savings over earlier models. The LM-100J will compete in a class of 16-25 ton aircraft with offerings from numerous foreign competitors – including Russia, Europe, Brazil, and China. All of these competitive aircraft are not identical, and some capabilities (*e.g.*, jet propulsion, expanded cargo space) may be more suitable for certain customer requirements. Lockheed Martin believes there is a robust commercial market for the LM-100J. In particular, the LM-100J is an attractive platform for domestic and international customers looking to fulfill civil, commercial, and humanitarian requirements:

- Serving markets where road and ports cannot get perishable products to markets before they spoil;
- Delivering goods to fragile ecosystems where other transportation modes might require hundreds of miles of roads or rails scarring the environment;
- Providing access to basic energy and food that have been denied due to natural disasters or de-stabilizing elements; and
- Gaining access to important global energy sources and other natural resources that can only be accomplished by air assets operating in harsh environments.

The legacy L-100 has proven itself as an essential piece of equipment in building and sustaining the Trans-Alaska pipeline, mitigating the Gulf Oil spill, and everyday supply of food, medical aid, and other human necessities to locations that are not reachable through other modes of transport. As the global middle class continues to expand and more communities in the developing world begin to enter the global marketplace, the need for these cargo transport services to remote areas will grow.

The ability of the L-100 and LM-100J to land on dirt/unimproved runways is a key aspect of the utility of the aircraft, but not an inherently military capability or a critical military advantage. There are many other civil aircraft that have proven to operate out of unimproved runways. For example, early generation Boeing 737s had an “unpaved strip kit” option available beginning in 1969. At the peak of their operations, 737s were making over 2,000 dirt landings a year. Other aircraft have also been flown from unimproved runways, including the 727. In fact, there are existing aircraft operators in Africa (*e.g.*, Transafrik) that operate 727 aircraft from the same dirt runways on which L-100 aircraft operate. Another example is the new Pilatus (Switzerland) PC-24 business jet, which has a large cargo door and is designed to operate from dirt strips as their single engine PC-12 aircraft have always done.

Similarly, roll-on/roll-off (RO/RO) is not unique to military aircraft. RO/RO is attractive to any customer that is interested in the efficient loading of oversize payloads. This is a critical feature for many commercial customers that do not have pre-positioned loading equipment in remote areas. In addition to the L-100 that are operating commercially around the globe, both the Russian AN-12 and IL-76 aircraft have RO/RO ramps and are capable of landing on short or unimproved airfields. These aircraft are flown by many commercial transport operators.

Moreover, new aircraft with RO/RO capability are emerging on the commercial market. For example, the Embraer C-390 from Brazil features a rear cargo ramp and door, modern commercial turbofan engines, and an advanced cockpit capability. Embraer plans an ambitious

campaign in both the military and commercial marketplace, teaming with U.S. companies to market the aircraft in the U.S., Europe, and in several Middle Eastern countries. The Chinese Y-9 and Y-20 aircraft with similar capabilities are also expected to emerge in the global market in the coming years. Indeed, Lockheed Martin expects the market for aircraft capable of operating in these non-traditional environments to increase. Providing RO/RO capability and the ability to land in austere environments will be important market discriminators for companies interested in capturing this business.

All of the existing L-100, AN-12, and IL-76 aircraft are reaching the end of their lifespan, and their numbers are dwindling each year due to their age. If these aircraft are not replaced with new commercial aircraft with similar capabilities, there will be a shortfall in global capacity to deliver economic development, humanitarian and disaster relief over the next decade. The United States should recognize the importance of filling this gap with a proven U.S.-origin commercial aircraft and not cede market share to new foreign market entrants.

LM100J & C-130J are not the Same Aircraft

The LM-100J is an inherently civilian aircraft that is significantly different from the military C-130J aircraft. There are many examples of aircraft – both U.S. and foreign made – that have military and commercial versions of the same basic platform. It is the addition of military systems/equipment that transforms a commercial aircraft into a viable military aircraft, not the basic airframe or performance parameters. Examples of military-specific equipment that could transform a commercial platform include, *inter alia*:

- Aircraft self-defense systems
- Aircraft survivability systems
- Military IFF transponders
- Military mission equipment
- Military tactical radios
- Military training systems
- Armaments/weapons
- Targeting systems
- Electronic counter measures
- Ballistic Protection/Armor

All of the systems and functions that make the C-130J a highly-sophisticated military platform, including those listed above, have been removed. The LM-100J lacks any of the self-protection systems of the C-130J. It has no flame arresting foam in the fuel tanks and lacks the ability to operate the paratroop doors in flight. There are no military-specific radios, data links, or encryption capabilities. As important, the LM-100J is not easily transformed into a military significant platform; due to the integrated nature of the LM-100J avionics, an unauthorized third-party would find it very difficult to integrate military systems onto the aircraft.

Controlling L-100/LM-100J as Defense Articles Will Cede Market Share to Foreign Competitors

As noted above, controlling the 50+ legacy L-100 aircraft operating around the world would roll back decades of control as a commercial aircraft. In addition, capturing emerging U.S. commercial platforms will make U.S. companies less competitive in the international marketplace. Controlling aircraft operating in a commercial environment as defense articles presents substantial obstacles to the civil operators, including additional restrictions on marketing and financing, complicating the provision of parts and maintenance to broken aircraft, increased

licensing requirements for related services, and temporary import license requirements for repair of spares serviced in the United States. These complications not only increase the cost of commercial operations, but also add time in a fast-paced, profit-driven market that places a premium on efficiency. In fact, the ease of repair and maintenance on the LM-100J is one of its most attractive commercial qualities, but this market advantage will be diminished if subjected to the extensive licensing requirements that accompany USML control. Simply put, international customers looking to fulfill commercial aircraft requirements are more likely to prefer commercial aircraft.

Increasing the cost of aircraft not only makes U.S. exporters less attractive to foreign purchasers; it also drives up costs for domestic U.S. sales as well. By ceding commercial sales to foreign competitors, U.S. companies are unable to benefit from the economies of scale that would reduce costs for aircraft sold to the U.S. Government.

As noted in the March 2, 2015 notice of inquiry, one of the objectives of reviewing the control list is to “strengthen the U.S. industrial base by, among other things, reducing incentives for foreign manufacturers to design out and avoid U.S.-origin content and services.” Ensuring that the L-100/LM-100J are able to be sold and maintained as commercial aircraft is in the U.S. public interest and will bring economic gain for the United States.

Recommendation: There are a number of potential reforms to Category VIII(a)(14) that could effectively address this issue, including:

- 1) **Delete Paragraph VIII(a)(14):** As noted above, sophisticated military airlift platforms, such as the C-130J, will continue to be controlled on the USML due to the integrated military mission systems. Deleting paragraph (a)(14) would ensure that civilian aircraft that do not have these military systems would be controlled as commercial aircraft without sacrificing any controls on military aircraft. L-100/LM-100J would transition from USML Category VIII to Commerce Export Commodity Classification Number (ECCN) 9A610.
- 2) **Revise Paragraph (a)(14) to reference integrated military functions:** This option maintains the explicit control of military airlift aircraft, but limits controls to those with one or more military mission systems.

“Aircraft with a roll-on/roll-off ramp, capable of airlifting payloads over 35,000 lbs. to ranges over 2,000 nm without being refueled in-flight, and landing onto short or unimproved airfields and incorporating one or more mission systems as listed in paragraph (a)(11) Note 1 of this category;”

This language would specifically capture military aircraft “that perform specific military functions, such as by providing military communication, electronic warfare, target designation, surveillance, target detection, or sensor capabilities.” L-100/LM-100J would transition from USML Category VIII to Commerce Control ECCN 9A610.

- 3) **Revise Paragraph (a)(14) to add explicit reference to military mission systems:** Lockheed Martin understands that the U.S. government may consider revising the controls on mission systems identified in Category VIII(a)(11). Lockheed Martin concurs that (a)(11) could benefit from revision, including improved alignment of controls with Category XI of the USML. In the event that paragraph (a)(11) was significantly changed or removed, this language would maintain USML controls on military airlift aircraft, similar to option (2) above.

“Aircraft with a roll-on/roll-off ramp, capable of airlifting payloads over 35,000 lbs. to ranges over 2,000 nm without being refueled in-flight, ~~and~~ landing onto short or unimproved airfields *and incorporating systems, equipment, assemblies, modules, and/or components that provides one or more of the following functions:*

- (i) *Aircraft Missile/Self Protection Systems, including:*
 - (A) *Radar Warning*
 - (B) *Missile Warning*
 - (C) *Infrared Countermeasure*
 - (D) *Flare/Chaff Countermeasures*
- (ii) *Electronic Warfare (EW) and/or Electronic Counter Measure (ECM)*
- (iii) *Voice and/or Data Communications that includes Electronic Counter-Counter Measure (ECCM) (i.e. HAVEQUICK I/II, SINCGARS, SATURN)*
- (iv) *U.S. government Identification Friend or Foe (IFF) Modes 4 or 5*
- (v) *Military and/or intelligence cryptographic (including encryption, decryption, and key management)*
- (vi) *Protective/Self-protection armor (for crewmembers and critical systems)*
- (vii) *Global Positioning System (GPS) receiving equipment that can decrypt precise positioning service (PPS) signals and/or used with antenna designed to reduce or avoid jamming signals.”*

- 4) **Revise Category VIII(a)(14) to include a negative list of excluded aircraft:** Options (2) and (3) above would create a positive list of aircraft controlled on the USML. This option would rely on civil certification to exempt commercial aircraft as follows:

“Aircraft with a roll-on/roll-off ramp, capable of airlifting payloads over 35,000 lbs. to ranges over 2,000 nm without being refueled in-flight, *and* landing onto short or unimproved airfields, *excluding aircraft that have both a Civil Aircraft Design Type certificate and a Standard Certificate of Airworthiness that are FAA approved, active, current, and valid;*”

II. Category VIII (e) & (h): Aircraft parts, components, accessories, attachments, associated equipment and systems

Lockheed Martin is also seeking clarification on controls for several aircraft parts and components identified in Category VIII (e) and (h).

Specifically, Category VIII(h)(10) controls “Radar altimeters with output power management or signal modulation (*i.e.*, frequency hopping, chirping, direct sequence-spectrum spreading) LPI (low probability of intercept) capabilities (MT if for an unmanned aerial vehicle, drone, or

missile that has a “range” equal to or greater than 300 km).” Lockheed Martin recommends that USML controls on these items exclude specific equipment that has achieved civil FAA Technical Standard Order (TSO) conformity. This approach is already used in other revised categories of the USML. For example, in a note to Category XI(a)(3), the USML excludes control of various specific radar/radio systems, including radar altimeter equipment conforming to FAA TSO-C87. Referencing commercial standards for radar/radio altimeter equipment, as contained in FAA TSO-C87, would ensure that paragraph (h)(10) does not inadvertently capture commercial civil-certified avionics equipment.

Recommendation: Add a note to Category VIII(h)(10) as follows: “*NOTE TO PARAGRAPH (h)(10): This paragraph does not control radar/radio altimeter equipment conforming to FAA TSO C87.*”

In addition, Category VIII(h)(17) controls: “Mission computers, vehicle management computers, and integrated core processors specially-designed for aircraft controlled in this category or controlled in ECCN 9A610”. The process of designing a new aircraft starts with basic payload, range, airways, airfield and cost requirements. To reduce both initial acquisition and lifetime operating costs, aircraft designers minimize complexity, number of parts, and number of crew that it takes to safely meet functional requirements. For the past 30 years, this has led to the development of common parts and centralized systems for functional elements of the aircraft configured to perform multiple functions. The result is the creation of integrated modular avionics – mission computers, integrated core processors, and vehicle management units – that enable the aircraft to be operated with fewer crew members and maintained and supported more safely, easily and affordably than aircraft in the past. These benefits are important to both civil and military aircraft competitiveness and safety. As a general matter, aircraft controlled by Commerce ECCN 9A610 will contain such systems. Controlling these systems as USML items would undermine the benefits described above.

Recommendation: Lockheed Martin recommends a minor revision to the note at the end of Category VIII: “Inertial navigation systems, aided or hybrid inertial navigation systems, Inertial Measurement Units, and Attitude and Heading Reference Systems in paragraph (e) and parts, components, accessories, and attachments in paragraphs (h)(2)-(5), (7), (13), (14), (17)-(19), and (21)-(26) are licensed by the Department of Commerce when incorporated in a ~~military~~ aircraft subject to the EAR and classified under ECCN 9A610. Replacement systems, parts, components, accessories and attachments are subject to the controls of the ITAR.” This note is critical to ensure that the USML does not inadvertently control commercial aircraft controlled under ECCN 9A610, including the LM-100J, if changes recommended in Section I above are adopted. Removing “military” would clarify that although items in 9A610 may have been transferred from the USML, they may not all be military items.

CONCLUSION

Thank you for the opportunity to provide comments in response to the notice of inquiry regarding USML Categories VIII and XIX. Lockheed Martin remains committed to supporting the ongoing effort to reform and improve the U.S. export control system. We are confident that the changes recommended above will have a positive impact on our ability to support U.S.

national security and foreign policy priorities by fostering U.S. competitiveness abroad and strengthening international relationships.

If you have any questions related to these comments or would like additional information related to the issues discussed above, please contact Mark Webber, Director, International Trade Policy, Government & Regulatory Affairs at 703-413-5951 or Mark.J.Webber@lmco.com.

For Lockheed Martin Corporation,

A handwritten signature in black ink, appearing to read "Gerald Musarra", with a long horizontal line extending to the right.

Gerald Musarra
Vice President, Government & Regulatory Affairs

cc: publiccomments@bis.doc.gov
Bureau of Industry and Security
U.S. Department of Commerce

BEFORE THE
Department of State
Washington, DC

In the Matter of

Notice of Inquiry, Request for Comments

Notice of Inquiry:

Request for Comments Regarding
Review of United States Munitions List
Categories VIII and XIX

Public Notice 9050

To: Directorate, Defense Trade Controls, Department of State (DDTC)

COMMENTS OF MATTHEW J. LANCASTER

Introduction

1. These observations relate, in primary part, to the control of software under revised United States Munitions List (USML) Category VIII – Aircraft and Related Articles at ITAR § 121.1 (hereinafter “USML Cat. VIII”).
2. This set of comments first introduces some relevant background and recommendations by topic; then provides some recommendations for incorporating the comments by providing example revised language.

BACKGROUND

General ITAR Jurisdiction Guidelines

3. For USML Categories, like USML Cat. VIII, which have been revised under the President’s Export Control Reform initiative (ECR), ITAR § 121.1(d) describes four ordered steps for self-determining whether an article is subject to the licensing jurisdiction of DDTC and the ITAR for export from the United States, as follows:
(1) if your commodity or software is controlled for reasons other than having a specially designed control parameter on the U.S. Munitions

List, no further review of the definition of specially designed is required.

(2) if your commodity or software is not enumerated on the U.S. Munitions List, it may be controlled because of a specially designed control parameter. If so, begin any analysis with §120.41(a) and proceed through each subsequent paragraph. If a commodity or software would not be controlled as a result of the application of the standards in §120.41(a), then it is not necessary to work through §120.41(b).

(3) if a commodity or software is controlled as a result of §120.41(a), then it is necessary to continue the analysis and to work through each of the elements of §120.41(b).

(4) commodities or software described in any §120.41(b) subparagraph are not specially designed commodities or software controlled on the U.S. Munitions List, but may be subject to the jurisdiction of another U.S. Government regulatory agency (see §120.5 of this subchapter).

4. I restate the four ordered steps, for the purpose of analyzing USML Cat. VIII, as follows:

(1) First, is the article an “**Enumerated Article**”, meaning that the article matches an entry on the USML, and the matched USML entry does not reference “specially designed”? If yes, stop. The article is a defense article.

(2) Second, is the article a “**Specially Designed Minor Article**”, meaning that the article is a part, component, accessory, attachment, or software used in or with a defense article, and not described by ITAR § 120.41(b)? If yes, stop. The article is a defense article.

(3) Third, is the article a “**Peculiarly Responsible Article**”, meaning that the article is peculiarly responsible for achieving or exceeding the controlled performance levels, characteristics, or functions described in a relevant USML paragraph? If yes, stop. The article is a defense article.

(4) In all other cases, the article is not a defense article.

5. To emphasize, the four ordered steps must be followed sequentially. DDTC has referred to this requirement as the “Order of Review”.

What is ITAR-controlled Software?

6. ITAR § 120.45(f) defines software as follows:
Software includes but is not limited to the system functional design, logic flow, algorithms, application programs, operating systems, and support software for design, implementation, test, operation, diagnosis and repair.

7. ITAR § 120.10(a)(4) defines technical data to include software, as defined at ITAR § 120.45(f), directly related to defense articles.

8. ITAR § 120.45(f) defines equipment, at least in part, as a combination of “software that operate[s] together to perform a function of, as, or for an end-item or system... Equipment that does not meet the definition of an end-item is a component, accessory, attachment, firmware, or software.”

9. These definitions establish that if the terms “**software**”, “**technical data**”, or “**equipment**” are used on the USML, a USML control for software potentially exists.

Overlapping and Superseding Controls for ITAR-controlled Software in USML Cat. VIII

10. USML Cat. VIII(i) controls:
Technical data (see §120.10 of this subchapter) and defense services (see §120.9 of this subchapter) directly related to the defense articles described in paragraphs (a) through (h) of this category and classified **technical data** directly related to items controlled in ECCNs 9A610, 9B610, 9C610, and 9D610 and defense services using classified technical data. (See §125.4 of this subchapter for exemptions.) (MT for technical data and defense services related to articles designated as such.)
[emphasis added].

11. Per Note to paragraph (b) to ITAR § 120.41, USML Cat. VIII(i) does not appear to be a “catch-all” control.

12. Because use of the term “**technical data**” implies that a USML control for software exists, and because USML Cat. VIII(i) does not appear to be a “catch-all”

control, all software directly related to defense articles described in paragraphs (a) through (h) of USML Cat. VIII is an Enumerated Article.

13. If USML Cat. VIII(i) is intended to control software, the control at USML Cat. VIII(i) for software overlaps with and, in some case, supersedes controls for software found elsewhere in USML Cat. VIII.

14. For example, USML Cat. VIII(d) controls:
Ship-based launching and recovery equipment specially designed for defense articles described in paragraph (a) of this category and land-based variants thereof (MT if the ship-based launching and recovery equipment is for an unmanned aerial vehicle, drone, or missile that has a range equal to or greater than 300 km).
[emphasis added].

15. Because USML Cat. VIII(d) uses the term “equipment”, software is implicated, and, as such, in part, USML Cat. VIII(d) controls ship-based launching and recovery software specially designed for defense articles described in paragraph (a) of USML Cat. VIII and land-based variants thereof.

16. Similarly, USML Cat. VIII(h)(1) implicates software:
Parts, components, accessories, attachments, and equipment specially designed for the following U.S.-origin aircraft: the B-1B, B-2, F-15SE, F/A-18 E/F/G, F-22, F-35 and future variants thereof; or the F-117 or U.S. Government technology demonstrators. Parts, components, accessories, attachments, and equipment of the F-15SE and F/A-18 E/F/G that are common to earlier models of these aircraft, unless listed in paragraph (h) of this category, are subject to the EAR.
[emphasis added].

17. In short summary, USML Cat. VIII(i) appears to capture software as an Enumerated Article, but both USML Cat. VIII(d) and USML Cat. VIII(h)(1) imply that software could be a Specially Designed Minor Article.

Inconsistent Language for ITAR-controlled Software between USML Cat. VIII and the Missile Technology Control Regime Annex at ITAR § 121.16 (the “MTCR Annex”)

18. The MTCR Annex states that “to the extent an article is on the United States Munitions List, a reference appears in parentheses listing the U.S. Munitions List category in which it appears.”

19. Item 9 – Category II to the MTCR Annex includes:
Instrumentation, navigation and direction finding equipment and systems, and associated production and test equipment as follows; and specially designed components and software therefor:
...
(f) Inertial or other equipment using accelerometers described by subitems (c) and (e) above, and systems incorporating such equipment, and specially designed integration software therefor (see §121.1, Category VIII(e) and Category XII(d)).
[emphasis added].

20. USML Cat. VIII(e) controls:
Inertial navigation systems (INS), aided or hybrid inertial navigation systems, Inertial Measurement Units (IMUs), and Attitude and Heading Reference Systems (AHRS) specially designed for aircraft controlled in this category or controlled in ECCN 9A610 and all specially designed components, parts, and accessories therefor (MT if the INS, IMU, or AHRS is for an unmanned aerial vehicle, drone, or missile that has a “range” equal to or greater than 300 km). For other inertial reference systems and related components refer to USML Category XII(d).

21. USML Cat. VIII(e) does not in any way control software.

22. In short summary, USML Cat. VIII(e) does not appear to capture software, but the MTCR Annex implies that a control for specially designed software exists at USML Cat. VIII(e).

23. Furthermore, if a control for specially designed software existed at USML Cat. VIII(e), it would appear to be superseded by the description in USML Cat. VIII(i) for software as an Enumerated Article.

Lack of Transparency with Respect to Control of Software in USML Cat. VIII(h)(1)

24. Line 16. above describes a possible control for software in USML Cat. VIII(h)(1).

25. While USML Cat. VIII(h)(1) appears to except from coverage software of the F-15SE and F/A-18 E/F/G common to earlier models of those aircraft, the Note to paragraph (h)(1) appears to be less generous with respect to **equipment** and (therefore) software:

Note to paragraph (h)(1): Specially designed (see §120.4(b)(3)(ii) of this subchapter) does not control parts, components, accessories, and attachments that are common to aircraft described in paragraph (a) of this category but not identified in paragraph (h)(1), and those identified in paragraph (h)(1). For example, a part common to only the F-14 and F-35 is not specially designed for purposes of the ITAR. A part common to only the F-22 and F-35—two aircraft models identified in paragraph (h)(1)—is specially designed.

26. Note to paragraph (h)(1) excludes from control certain parts, components, accessories and attachments, but is silent with respect to **equipment**.

27. Because Note to paragraph (h)(1) is silent with respect to **equipment**, it is also silent with respect to software.

28. Software is captured by using the term "**equipment**" in USML Cat. VIII(h)(1), but software is not expressly excluded by the language in the Note to paragraph (h)(1).

29. For example, Note to paragraph (h)(1), as currently written, implies that software common to only the F-14 and F-35 is specially designed for purposes of the ITAR.

30. If correct, the analysis to determine that software common only to the F-14 and F-35 is specially designed for purposes of the ITAR is a very difficult analysis, and could be more transparent.

Lack of Objective Criteria with Respect to Controls for Software in USML Cat. VIII(i)

31. Line 10. above describes a possible control for software in USML Cat. VIII(i).

32. The term “directly related to” is used in the control for technical data and (therefore) software in USML Cat. VIII(i).

33. The ITAR does not define the term “directly related to”.

34. Because the term “directly related to” is undefined and unrelated to obvious and objective criteria, application of the control at USML Cat. VIII(i) to unclassified software is likely to be highly subjective and lacks predictability for industry as to what technical data and software DDTC intends to control under USML Cat. VIII(i).

35. In 79 FR 0035, DDTC stated:
One commenting party observed that, with regard to technical data directly related to a defense article controlled on the USML and unclassified technical data directly related to parts and components of the defense article that are controlled on the CCL, insofar as the parts and components are directly related to the defense article, certain of the technical data directly related to the defense article by virtue of being directly related to the parts and components of the defense article would not be captured by the technical data control paragraph, depending on whether the parts and components are part of the defense article at the point of export, or are proposed for export apart from the defense article. The commenting party discerns an export jurisdictional conflict. The Department clarifies that unclassified technical data directly related to the parts and components that are controlled under the CCL would not be controlled under the ITAR. The Department would, however, have export jurisdiction over aggregated technical data that included technical data directly related to a defense article. Unclassified technical data directly related to parts and components that would be controlled under the CCL would remain subject to the EAR if they were proposed for export apart from the ITAR controlled technical data.

36. It appears that, in 79 FR 0035, DDTC explained that unclassified technical data and (therefore) unclassified software specially designed for at least one USML Cat. VIII defense article would classify for export from the US under USML Cat. VIII(i).

37. It also appears that, in 79 FR 0035, DDTC explained that unclassified technical data and (therefore) unclassified software which is not specially designed for at least one USML Cat. VIII defense article would classify for export from the US under the licensing jurisdiction of BIS and the EAR, insofar as no other USML Categories are implicated.

38. With respect to unclassified technical data and (therefore) unclassified software, use of the term “specially designed” is not only sufficient to describe the intended control, but also avoids the subjectivity and unpredictability with respect to, instead, the use of the term “directly related to”.

39. Use of the term “specially designed” with respect to unclassified technical data and (therefore) unclassified software in USML Cat. VIII(i) would also resolve the conflict described in Lines 10-17 and Lines 18-23 above.

Inapplicable Reference in the MTCR Annex

40. Item 10 – Category II to the MTCR Annex includes:
Flight control systems and “technology” as follows; designed or modified for the systems in Item 1.

...

(c) Design technology for integration of air vehicle fuselage, propulsion system and lifting control surfaces to optimize aerodynamic performance throughout the flight regime of an unmanned air vehicle, (see §121.1, Category VIII (k))...
[emphasis added].

41. USML Cat. VIII(k) is “[Reserved]”.

Lack of Transparency with Respect to Control of Developmental Aircraft Engines in USML Cat. VIII(f)

42. USML Cat. VIII(f) controls:
Developmental aircraft funded by the Department of Defense via contract or other funding authorization, and specially designed parts, components, accessories, and attachments therefor.

43. I will call the type of control embodied by USML Cat. VIII(f) a “Developmental Control”.

44. Besides USML Cat. VIII, USML Categories V, VI, X, XI, XIII, XV and XX also contain Developmental Controls.

45. USML Category XIX does not contain a Developmental Control.

46. An exporter of developmental aircraft engines should be expected to initiate review of the USML at USML Category XIX.

47. It is reasonable to predict that an exporter of developmental aircraft engines will restrict the review of the USML to only USML Category XIX.

48. USML Cat. VIII(f) appears to describe developmental aircraft engines.

49. If the ITAR intends to capture developmental aircraft engines, a Developmental Control should be added to USML Category XIX.

Uniformity with Respect to Format

50. USML Cat. VIII(h)(20) should have its format revised to capture the definition of “classified” in a Note to paragraph (h)(20), consistent with the format for similar such entries in USML Categories IV, V, IX, X, XI and XV(e)(21).

RECOMMENDATIONS

51. Please consider the above-described and following recommended revisions (revisions below in **bold red font**) for not only USML Cat. VIII, but also, as applicable, for any other similarly situated USML Category description:

USML Cat. VIII:

(f) Developmental aircraft funded by the Department of Defense via contract or other funding authorization, and specially designed parts, components, accessories, and attachments therefor.

Note 1 to paragraph (f): Paragraph (f) does not control aircraft and specially designed parts, components, accessories, and attachments therefor (a) in production; (b) determined to be subject to the EAR via a commodity jurisdiction determination (see §120.4 of this subchapter), or (c) identified in the relevant Department of Defense contract or other funding authorization as being developed for both civil and military applications, **or (d) aircraft gas turbine engines and specially designed parts, components, accessories, and attachments therefor.**

...

(h) Aircraft parts, components, accessories, attachments, associated equipment and systems, as follows:

(1) Parts, components, accessories, attachments, and equipment specially designed for the following U.S.-origin aircraft: the B-1B, B-2, F-15SE, F/A-18 E/F/G, F-22, F-35 and future variants thereof; or the F-117 or U.S. Government technology demonstrators. Parts, components, accessories, attachments, and equipment of the F-15SE and F/A-18 E/F/G that are common to earlier models of these aircraft, unless listed in paragraph (h) of this category, are subject to the EAR;

Note to paragraph (h)(1): Specially designed (see §120.4(b)(3)(ii) of this subchapter) does not control parts, components, accessories, attachments, **and software** that are common to aircraft described in paragraph (a) of this category but not identified in paragraph (h)(1), and those identified in paragraph (h)(1). For example, a part common to only the F-14 and F-35 is not specially designed for purposes of the ITAR. A part common to only the F-22 and F-35—two aircraft models identified in paragraph (h)(1)—is specially designed.

...

*(20) Any part, component, accessory, attachment, equipment, or system that:

(i) is classified;

(ii) contains classified software directly related to defense articles in this subchapter or 600 series items subject to the EAR; or

(iii) is being developed using classified information (see §120.10(a)(2) of this subchapter).

Note to paragraph (h)(20): “Classified” means classified pursuant to Executive Order 13526, or predecessor order, and a security classification guide developed pursuant

Comments re USML Cat. VIII
Matthew J. Lancaster
Page 11 of 22
March 11, 2015

thereto or equivalent, or to the corresponding classification rules of another government or international organization.

...

(i) Technical data (see §120.10 of this subchapter) **specially designed for** and defense services (see §120.9 of this subchapter) directly related to the defense articles described in paragraphs (a) through (h) of this category and classified technical data directly related to items controlled in ECCNs 9A610, 9B610, 9C610, and 9D610 and defense services using classified technical data. (See §125.4 of this subchapter for exemptions.) (MT for technical data and defense services related to articles designated as such.)

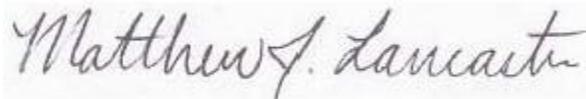
...

Item 10 – Category II to the MTCR Annex

Flight control systems and “technology” as follows; designed or modified for the systems in Item 1.

...

(c) Design technology for integration of air vehicle fuselage, propulsion system and lifting control surfaces to optimize aerodynamic performance throughout the flight regime of an unmanned air vehicle, (see §121.1, Category VIII(i))...



Matthew J. Lancaster
PRIVATE CITIZEN

March 11, 2015

May 1, 2015

Department of State
Bureau of Political-Military Affairs
Department of Defense Trade Controls
2401 E Street, N.W.
12th Floor, SA-1
Washington, D.C. 20522

ATTN: Mr. C. Edward Peartree
Director, Defense Trade Controls Policy

SUBJECT: FRN 2015-04291 Review of USML Categories VIII and XIX

Dear Mr. Peartree:

Northrop Grumman Corporation wishes to thank the Department for the opportunity to submit comments in review of the above proposed rules as we support the Department's objective of establishing a positive United States Munitions List (USML). In response, we provide the following recommendations:

1. USML VIII(a)(5) VIII(a)(6) and VIII(a)(13) UAVs and OPVs. The recently released U.S. Export Policy for Unmanned Aerial Systems made reference to EAR controlled MTCR Cat I UAVs and working with foreign countries on setting standards for the sale, transfer, and subsequent use for military UAS; however the policy, the ITAR nor the EAR creates a bright line definition of a "military" vs. "commercial" UAV.

The "military" significance of these unmanned aircraft is truly defined by the capabilities of systems or the payloads incorporated into the aircraft. In addition, the U.S. Department of State (ISN/MBC) has previously held that OPVs should be treated as UAVs for the purpose of controlling within the MTCR. Therefore, we would recommend deleting VIII(a)(5), (6) & (13) and only control unmanned aircraft if their capabilities meet the same USML threshold of a manned aircraft. As a way of providing that bright line differentiation between military and non-military (thus differentiate ITAR and EAR controlled) UAVs and position the regulations for future advancements in UAV development, it is our recommendation to simply add a UAV variant to each ITAR controlled aircraft such as:

(a) Aircraft as follows:

* (1) Bombers

(i) Unmanned or optionally piloted variant (MT if range is equal to or greater than 300km)

* (2) Fighters, fighter bombers, and fixed wing attack aircraft

(i) Unmanned or optionally piloted variants (MT if range is equal to or greater than 300km)

...

*(7) military intelligence, surveillance, and reconnaissance aircraft

(i) Unmanned or optionally piloted variants (MT if range is equal to or greater than 300km)

....

(12) Aircraft capable of being refueled in flight...

*(i) Unmanned or optionally piloted variants (MT if range is equal to or greater than 300km)

An alternative to adding a sub-paragraph to each entry, the department could simply add to the end of each entry "(for unmanned variants, MT if the UAV or OPV has a range equal to or greater than 300km.)" as is currently applied in VIII(a)(6) & (10)

2. USML CAT VIII(a)(7) We recommend providing a bright line definition in terms of capabilities and performance parameters for USML Cat VIII(a)(7) - Military intelligence, surveillance, and reconnaissance aircraft. This is necessary given that many of these types of aircraft are in fact commercial aircraft with minor modifications to carry various sensors. As in the case with UAVs, the "military" significance of these ISR aircraft is actually better defined by the capabilities of their USML or commercial payload.

3. USML CAT VIII(a)(8). We recommend providing a bright line definition in terms of capabilities and performance parameters for VIII(a)(8) - Electronic warfare, airborne warning and control aircraft. Again, these aircraft often commercial then modified. Whether they are or not controlled in this entry is better defined by the performance capabilities of their systems or payload. An aircraft simply equipped with defensive electronic countermeasure, such as the AN/AAQ-24(V) DIRCM (Directional Infrared Countermeasure) should not have the same controls as an EA-6B Prowler.

4. USML CAT VIII(a)(11). It is our recommendation that DTC move USML Category VIII(a)(11) controls to the CCL under the 9A6xx Series. As written, Cat VIII(a)(11) essentially overlaps every other VIII(a) paragraph and could potentially be selected in lieu of a more appropriate USML paragraph which is SME. Note 1 to paragraph (a)(11) actually identifies electronic warfare and surveillance capabilities which are described in USML Cat VIII(a)(7) & (8).

We believe this was not envisioned, but that VIII(a)(11) was intended to control those aircraft otherwise controlled under the CCL but only added to the USML to account for "mission systems" that are controlled elsewhere on the USML. The addition of these aircraft to the USML complicates both export licensing strategies and congressional notification valuation

determinations. We also believe the driving issue behind VIII(a)(11) challenges is the “see through rule” and the failure to adopt an “incorporation rule” that applies to the entire USML. And while we agree those aircraft that integrate mission systems warrant control beyond that of the broader CCL, control at levels above the CCL 600 series are not required.

With the remainder of USML CAT VIII(a) in place to control those aircraft that warrant higher controls, CAT VIII(a)(11) could be moved to the 9A610.b. Series of the CCL and apply an “incorporation statement” similar to that at the end of USML CAT VIII regarding incorporated Inertial Navigation Systems. Specifically, recommend the following:

- Add at the end of USML CAT VIII: “Note 1: Mission systems controlled under the ITAR are licensed by the Department of Commerce when incorporated in a military aircraft subject to the EAR and classified under 9A610. Replacement systems, and those parts, components, accessories attachments otherwise controlled under the ITAR are subject to the controls of the ITAR.”
- Within the CCL

Add, “9A610.b1. Aircraft incorporating any mission system controlled under the USML not elsewhere enumerated in USML CAT VIII(a)”

Add, “9A610.b2 Unmanned or optionally piloted variants (MT if range is equal to or greater than 300km)

“Note 1: Mission systems controlled under the ITAR are licensed by the Department of Commerce when incorporated in a military aircraft subject to the EAR and classified under 9A610. Replacement systems, and those parts, components, accessories attachments otherwise controlled under the ITAR are subject to the controls of the ITAR.”

By moving those USML CAT VIII(a)(11) aircraft to the 600 series:

1. It would better align with the intent of ECR to limit controls to those higher technologies (Note the CAT VIII(a)(11) is not SME) as the mission systems are incorporated.
2. It would eliminate issues regarding congressional notification and value of such notifications since only MDE is subject to congressional notification requirements under Commerce
3. It would maintain reasonable level of control (ability to manage control through application of exceptions; e.g., exclude from STA eligibility) on the subject aircraft. Basically, all of the same DoD staffing points get a vote.

5. USML CAT VIII(h)(1). We recommend adding language to USML Cat VIII, Note to paragraph (h)(1) as necessary to clarify that (h)(1) does not control articles (or their components) that are elsewhere enumerated on the USML. We feel this is necessary given the misinterpretation by members of both industry and the USG that VIII(h)(1) now controls all F-35, B-1, B-2, etc.

“related” parts regardless of previous USML category. For example, the F-35 Radar (APG-81) remains USML Cat *XI(a)(3) which is SME and was not to be reclassified as VIII(h)(1) because it is “specially designed” for the F-35. Likewise, parts or components of the APG-81 that might otherwise fall to the CCL 600 series would not be reclassified under VIII(h)(1) to prevent them from moving to the CCL. We recognize VIII(h) only controls “Aircraft parts, components, accessories...” and do not believe a change to the control language is necessary; however we believe clarification within the Note would be beneficial.

6. Release of all CCL “.y” items. We recommend specific “parts,” “components,” “accessories,” and “attachments” which could be classified in any “.y” paragraph on the CCL be released from the USML. The items that are described in the CCL “.y” paragraphs have been determined to be very minor and require lesser controls (AT-only). However some of these parts remain on the USML given “catch-all” paragraphs on the USML (e.g. VIII(h)(1)). We believe this is a step closer to creating a single list as the technological capability to create these “.y” items (e.g. hydraulic check valve, aircraft tires, electrical connectors, etc.) is the same regardless of the airframe. Further, the . To implement, we suggest modifying ITAR §120.41 “Specially designed” definition by adding another (b) release criteria for CCL “.y” items.

7. USML Incorporated Items. We recommend adding language to properly control higher order assemblies which contain USML (enumerated or otherwise described) parts, components, accessories, attachments, or systems. Parts, components, accessories, etc. are enumerated in USML paragraphs such as Cat VIII(h)(1-26); however their next higher order assemblies are often not enumerated or described creating uncertainty on how to apply export control requirements in a post ECR environment. For example, the E-2 aft fuselage is not enumerated on the USML and is classified 9A610.x. However, the tail hook for the E-2 is enumerated as USML Cat VIII(h)(5) “Tail hooks and arresting gear, and specially designed parts and components therefor.” This was not an issue prior to ECR as Cat VIII(h) acted as a “catch-all” paragraph for USML aircraft parts as well commercial systems which incorporated USML parts. However, post-ECR, to properly classify the aft fuselage with the tail hook installed, the way up to the final end-item aircraft level, *VIII(a), and which is almost always SME.

Short of eliminating the “see through rule,” there needs to be a better way of accounting for USML incorporated items in a post ECR environment. We recommend adding “as well as higher order assemblies for which these items are integrated” to the end of applicable USML paragraphs. For example USML Cat VIII(h)(5) would be changed to “Tail hooks and arresting gear, and specially designed parts and components therefor as well as higher order assemblies for which these items are integrated.” NOTE that this same issue/dilemma exists for all other USML categories, especially in USML Cat XI – Military Electronics due to low level (WBS) components enumerated in XI(c).

8. Specially designed. We recommend changing paragraph “b” within definition §120.41 “Specially designed”:

From: “(b) For purposes of this subchapter, a **part, component, accessory, attachment, or software is not specially designed...**”

To: “(b) For purposes of this subchapter a **commodity** or software is not specially designed...”

This change would be consistent with the language of §120.41(a). Moreover, the term “specially designed” has been applied as control language for end items and systems in addition to parts, components, accessories, or attachments. For example, USML Cat VIII(a)(15)(ii) “*Foreign-origin aircraft **specially designed** to...*” and Cat VIII (d) “*Ship-based launching and recovery equipment **specially designed** for...*” use the “specially designed” control language for end-items/systems. Similar change is needed for the EAR definition as “specially designed” is used to control end-items and systems on CCL (e.g. 9A610.f. ‘*Ground equipment*’ “*specially designed*” for aircraft controlled by either USML paragraph VIII(a) or ECCN 9A610.a).

9. Tooling, test, and/or support equipment. If, as believed, the intent of the USG is to control “tooling, test, and/or support equipment” on the USML for those identified aircraft in Cat VIII (h)(1) and the parts and components therefor, recommend adding clarifying language to enumerate the equipment as stated within the published 16 April 2013 FRN. The FRN states “Tooling and test and support equipment are only controlled if specifically enumerated on the USML. The B group of the new 600 series (e.g., ECCN 9B610) on the CCL should be reviewed for potential controls on tooling and test and support equipment.”

Cat VIII(h)(1) does not enumerate tooling and test and support equipment, however, current related control language in CCL 9B610 (which controls test, inspection, and production equipment) indicates *USML Category VIII(h)(1) controls for “parts,” “components,” “accessories,” “equipment,” and “attachments” “specially designed” for the aircraft enumerated or otherwise described in Category VIII(h)(1).* Original publication of 9B610 did not make any reference to VIII(h)(1) controls. Subsequent changes 9B610 indicating VIII(h)(1) controls “for *stealth and low-observable aircraft*” as well as informal USG guidance indicates an intent to control tooling and test and support equipment in VIII(h)(1).

Other USML categories follow the FRN guidance and enumerate the specific types of tooling and test and support equipment. Cat VI(e)(5) enumerates “Any machinery, device, component, or equipment, including production, testing and inspection equipment, and tooling, specially designed for plants or facilities controlled in paragraph (e) of this section.” USML Cat VII(g)(13) enumerates “*Test or calibration equipment for the mission systems of the vehicles in this category...*” USML Cat XI(a)(11) enumerates “*Test sets specially designed for testing defense articles controlled in paragraphs...*” USML Cat XIII(k)(1) is a match on the USML as it enumerates “*Tooling and equipment specially designed for production of low observable (LO) components.*”

10. USML Cat VIII(h)(20) and XIX(f)(6) Clarification. We request clarification/confirmation to the intended controls for USML Cat VIII(h)(20) and XIX(f)(6) and similar paragraphs in all other ECR updated categories. As written, these entries “enumerate” any part, component, accessory, attachment, equipment, or system that: (i) is classified; (ii) contains classified software directly related to defense articles in this subchapter or 600 series items subject to the EAR; or (iii) is being developed using classified information. Is the USG intent for these entries

to control all classified parts, components, etc. (including those that are otherwise specifically enumerated within the category) or only those classified items not enumerated elsewhere in the subject category?

For example, an unclassified aircraft mission computer system is categorized in the enumerated entry of Cat VIII(h)(17). If the operational flight program (OFP) software for that system is classified "Secret," it is unclear if the system remains categorized in Cat VIII(h)(17) and designated SME per 120.7 or if now the addition of classified software changes the mission computer system from Cat VIII(h)(17) to Cat VIII(h)(20). If the intent is the former, recommend changing Cat VIII(h)(20) to "Any part, component, accessory, attachment, equipment, or system n.e.s. that."

If the intent is for all classified parts to go to VIII(h)(20) then clarification should be added to all other VIII(h) entries indicating they only control unclassified items.

11. Enumeration of Software vs "Technical Data". We recommend "software" be explicitly enumerated as required in Category VIII and other USML categories as in IX(b)(4) and XI(b). Properly classifying "software" which can simultaneously be classified as both a subset of a USML "system" and as "technical data" related to same USML "system" can be confusing. This is further complicated when the USML system is not otherwise controlled on the USML until the software is loaded as the hardware components of today's computer system are not "specially designed" but are commercial. The hardware components that host USML software were on the USML in catch-all paragraphs prior to ECR are now on the CCL.

Using the mission computer again as an example, when the (unclassified) OFP is loaded on "specially designed" mission computer hardware it is easy to classify the entire system as VIII(h)(17). But it is not as clear how the OFP software and the "specially designed" computer hardware should be classified when they are separated. The OFP software should remain VIII(i), "technical data" related to VIII(h)(17) mission computer "system" (not related to the hardware "part"). Prior to ECR, the hardware would be VIII(h); however, now it is not so obvious. Without the software the hardware could be classified, 9A610.x as in and of itself it cannot function as a VIII(h)(17) mission computer. We believe this is the USG intent as this is one of the few entries that does not utilize the common phrase "and specially designed parts and components therefor." If the USG, feels necessary to control the mission computer hardware, we recommend simply appending the "parts and components therefor" phase to this entry.

In this example, the OFP software remained USML Cat VIII(i) only because "mission computer systems" was enumerated on the USML. This is not the case in many instances and is making it more difficult to properly classify software. For example, an XI(a)(3)(i) airborne tracking radar can have zero hardware parts that are enumerated on the USML as the controlled performance is software driven.

12. Equipment. We recommend changing the ITAR definition of "Equipment" to "Equipment is an end-item used in the production, testing, inspection, or maintenance of an end-item, combination of parts, components, accessories, attachments, firmware, or software." Similar to "accessories," "equipment" is often referring to articles that are not parts or components of the system itself; but differs in that the function are more or less associated with those in the CCL "B" Group. The current definition of "equipment" loses any significance as it can be any combination of anything and everything in 120.45 (a)-(g) without any differentiation. This again creates confusion, post ECR, as the term "equipment" can be anything (a part or component)

and is used simultaneously in “a” major end-item paragraphs (mainly in Cat XI) as well as the subordinate parts and component paragraphs. As with the software defined radio example, the fact that “equipment” is listed in XI(a)(5) it is unclear if the radio hardware should now be SME XI(a)(5) since it is not enumerated in XI(c). Because of this reason of redundancy and confusion, we further recommend the term “equipment” only to be used in the paragraphs that specifically enumerate “parts, components, accessories, attachments, associated equipment, and systems” and deleted from entries such as XI(a)(3) “Radar systems.”

13. Defense Services. We anxiously look forward to the release of the revised definition of Defense Service. In order to realize the intended benefits of ECR, we recommend the published rule clearly state the maintenance of an item subject to the EAR that has been integrated or installed into a defense article not be defined as a defense service.

Should clarification or subsequent technical discussions be necessary, please contact either Steve Headley at james.headley@ngc.com, (703 280-4806), or myself at thomas.p.donovan@ngc.com (703-280-4045).

Sincerely,

Thomas P. Donovan
Director, Export Management
Global Trade Management

May 1, 2015

Via Email

Mr. C. Edward Peartree
Director
Office of Defense Trade Controls Policy
Directorate of Defense Trade Controls
U.S. Department of State
2401 E Street, NW
SA-1, 12th Floor
Washington, DC 20037

Email: DDTCPublicComments@state.gov

Reference: Docket Number DOS-2014-0030

Subject: Review of USML Categories VIII and XIX

Dear Mr. Peartree:

Raytheon Company ("Raytheon") respectfully submits the following comments on U.S. Munitions List ("USML"), 22 C.F.R. §121, Category VIII in response to the *Request for Comments Regarding Review of USML Categories VIII and XIX*, 80 Fed. Reg. 11314 (March 2, 2015). Based upon our experience in applying the revised Category VIII, we would like to draw the attention of Directorate of Defense Trade Controls ("DDTC") to certain technical issues with the language in Category VIII that we believe requires clarification.

A. Category VIII(h)(6) External Stores Support Systems for Ordnance or Weapons

Category VIII(h)(6) reads, in pertinent part, "... external stores support systems for ordnance or weapons ..."

The term "external stores support system" is not based on an industry or Department of Defense ("DOD") standard and has caused confusion for Raytheon when applying Category VIII(h)(6) to certain U.S. Government programs. Therefore, we are seeking clarification on the types of systems that are intended to be covered by this paragraph. For example, "external stores support systems," which does not utilize "specially designed," could cover:

1. A communication system that can energize, control, and employ a weapon. This article is a weapon firing communication system.

2. A communication system in the cockpit of an aircraft that communicates between the weapon and the cockpit, exchanging only weapon status information. The communication system does not energize, control, or employ the weapon. This article is a weapon status checking system.
3. An aircraft radar separately mounted on an aircraft that locates targets for the stores system.
4. A communication system for the radar system in article 3 above.
5. Test set equipment for the store system.

The first article on the list likely is meant to be controlled by VIII(h)(6). It is not clear; however, whether Category VIII(h)(6) is intended to cover all five articles described above. We believe that articles 2-5 above are more properly categorized under other USML categories and Export Classification Numbers ("ECCN"). The closest industry standard that Raytheon identified as potentially related to external stores support systems is the definition of aircraft/store electrical interconnection system ("AEIS") in Section 3.1.2 of DOD Interface Standard, Aircraft/Store Electrical Interconnection System (MIL-STD-1760E). Section 3.1.2 reads:

The AEIS is a system composed of a collection of electrical (and fiber optic) interfaces on aircraft and stores through which aircraft energize, control, and employ stores. The AEIS consists of the electrical interfaces and interrelationships between the interfaces necessary for the transfer of electrical power and data between aircraft and stores and from one store to another store via the aircraft.

This definition suggests a more limited interpretation that focuses on systems that are more directly related to the use and employment of ordnance and weapons. This definition would capture weapon firing communication systems (example #1 in listing above). Without clarification, we believe that industry will be forced to apply its own interpretations that may or may not be consistent with DDTC's intention in drafting this provision.

Recommendation:

We recommend that DDTC add a note to Category VIII(h) that better conforms to the standard industry and DOD interpretation of what constitutes an AEIS. The text of such a note could read:

Note to (h)(6): External stores support systems are systems through which the aircraft energizes, controls, and employs stores.

B. Category VIII(h)(24) for Thermal Engines

Category VIII(h)(24) reads, "[t]hermal engines specially designed for aircraft controlled in this category or controlled in ECCN 9A610." The related Category XIII(h)(2) reads, "[e]nergy conversion devices not otherwise enumerated in this subchapter, as follows... [t]hermal engines specially designed for platforms or soldiers systems specified in this subchapter."

We are unaware of any industry standard for the term "thermal engine," and it is not defined in either Category VIII(h)(24) or XIII(h)(2)

The closest standard industry term we found is "heat engine," which is, any system that converts heat to mechanical energy.¹ We believe that using this definition to interpret Category VIII(h)(24) would be overly broad as that definition captures most standard engines. For example, all internal combustion engines are heat engines. Therefore, a standard reciprocating engine modified for use in an unmanned aerial vehicle ("UAV") would be controlled under Category VIII(h)(24), even though this type of technology is not special or unique to defense articles.

We believe that the intent of VIII(h)(24) may, rather, be to capture energy scavenging or harvesting systems. Examples of such systems on an aircraft include energy harvesters that generate power from waste jet exhaust or from the temperature differential between the inside of the cockpit and the outside air.

We also believe that use of the term "engine" to describe these devices, although technically correct, may lead to confusion concerning the nature of energy scavenging or harvesting systems. These devices are not the main propulsion unit (e.g., jet engine, reciprocating engine, etc.) of the aircraft but rather auxiliary systems that support power generation.

The same rationale applies to replacing the term "thermal engines" with "energy scavenging or harvesting systems" in Category XIII(h)(2) as the proposed language is less ambiguous. XIII(h)(2) controls "thermal engines" for "soldier systems." Clearly, Category XIII(h)(2) is not intended to cover traditional engines. Energy harvesters in this context are normally small light weight systems that can be used on a man portable soldier system.

If this interpretation is correct, we believe that a clarification is appropriate.

Recommendation:

We recommend that Category VIII(h)(24) be revised to read:

Energy scavenging or harvesting systems specially designed for aircraft controlled in this category or controlled in ECCN 9A610.

In addition, we recommend that the following note be added:

Note to paragraph (h)(24): Energy scavenging or harvesting systems are systems that convert external thermal energy that is normally present under routine aircraft operation into mechanical energy.

¹ See http://en.wikipedia.org/wiki/Heat_engine.

Please note that, if adopted, corresponding revisions should be made to Category XIII(h)(2).

C. The Proper Classification of Unmanned Aerial Vehicles in Category VIII(a)

Raytheon is seeking clarification as to the proper classification of UAVs. Currently, there are three subparagraphs in Category VIII(a) that cover UAVs. They are as follows:

(a)(5) Unarmed military unmanned aerial vehicles (UAVs) (MT if the UAV has a range equal to or greater than 300km).

(a)(6) Armed unmanned aerial vehicles (UAVs) (MT if the UAV has a range equal to or greater than 300km).

(a)(10) Target drones (MT if the drone has a range equal to or greater than 300km).

In the first instance, Raytheon seeks clarification as to whether all ITAR-controlled UAVs are meant to be classified in either Category VIII(a)(5), (6) or (10) to the exclusion of the other aircraft specified in subparagraph (a). For example, if a UAV is more distinctly described by another Category (a) subparagraph, we seek clarification as to whether the UAV should be captured in the more specific subparagraph. The basic reason for this request for clarification is to confirm that we only need to review these three subparagraphs when assessing the classification of a UAV.

Secondly, we seek clarification on whether a commercial UAV that integrates an ITAR article but, otherwise does not meet the performance capabilities described by subparagraphs VIII(a)(5), (6) or (10), is properly treated as non-USML (while the integrated ITAR article would be classified and licensed based on parameters identified in the USML category for the integrated article). For example, we seek clarification on whether a commercial UAV not meeting the parameters in subparagraphs VIII(a)(5), (6) or (10), which does, however, incorporate an ITAR-controlled sensor, would be EAR controlled (with the sensor being ITAR controlled). In such case, only the sensor would be USML and, thus, licensed.

Finally, we seek clarification on the meaning of military UAVs for the purposes of subparagraph (a)(5). Does "military" in this context equate to the incorporation of a "mission system" (such as subparagraph (a)(11))? If not, we suggest that DDTC clarify its intent for what constitutes a "military UAV". We would argue that "military" means something more than the mere incorporation of an ITAR-controlled sensor or other defense article.

Recommendation:

For the first two clarifications, we do not recommend specific regulatory language but, rather, recommend that DDTC provide guidance in the regulations, in response to these comments, or in other published guidance. For the question surrounding the meaning of "military," we recommend that DDTC clarify what constitutes a "military UAV" in Category VIII(a)(5). If

“military” in this context means the incorporation of a mission system, we recommend the following note be added to paragraph (a)(5):

Note to paragraph (a)(5): "Military UAVs" are defined as UAVs that incorporate any mission system (see Note 1 to paragraph (a)(11) below) controlled under this subchapter.

If “military” means something else, we recommend that DDTC define it.

Thank you for the opportunity to present Raytheon’s views concerning Category VIII.

If you have any questions concerning this submission, please contact Karl Abendschein, Senior Manager, Global Trade Compliance, at karl.abendschein@raytheon.com or (703) 284-4275 or the undersigned at julia.court.ryan@raytheon.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Julia Court Ryan", with a stylized flourish at the end.

Julia Court Ryan
Senior Counsel
Global Trade Compliance, Governance

These comments in response to the Notice of Inquiry, 80 FR 11314 addresses Topic Number 4. The comments specifically address parts, components, accessories and attachments (PCAA) in USML Category VIII (h).

Background -- Export Control Reform (ECR) has resulted in a series of phased changes to USML and CCL Categories. The phased revisions moved some military end-items and most parts and components from ITAR to the new EAR CCL 600 Series munitions list, which the President Determined No Longer Warrant Control Under the USML. Export Control Reform for the most part, has resulted in significant improvements to U.S. export controls and has resulted in several advantages for U.S. exporters and U.S. competitiveness.

Under ECR, exporters follow an Order of Review for classification by first determining if the item is enumerated in the USML. One of the important objectives of ECR was to create a more positive ITAR control list and eliminate, where possible, catch-all controls in the USML. Most catch-all controls of specially designed parts, components, accessories and attachments were moved to the new CCL 600 Series, but it must be emphasized that these items were not decontrolled; only moved under the licensing authority and rules of the EAR.

EAR controls offer several benefits to U.S. industry including: the availability of certain EAR License Exceptions, such as STA. In particular, the availability of the parts and components (de minimis) rule greatly reduced the tendency for foreign defense firms to design ITAR Free military systems; thereby increasing U.S. exports.

Comments, Concerns and Suggestions for USML Category VIII (h) -- Most military aircraft parts and components, no longer enumerated in Category VIII (h) have moved to the catch-all controls in the CCL under ECCN 9A610.x. Unfortunately, the catch-all phrase -- and specially designed parts and components therefor -- is still used in 8 of the current 24 subparagraphs of VIII (h): VIII (h) (2), (3), (4), (5), (6), (11), (14), and (15).

We believe this is an overuse of the catch-all phrase in the USML and not in keeping with the spirit and objectives of Export Control Reform, to create a more positive list and to shift to the EAR those items that the President Determined No Longer Warrant Control Under the USML. For the eight subparagraphs in VIII (h) we believe an attempt should be made to enumerate only those specific PCAA of the equipment or systems in VIII (h) that are complex and not readily available from foreign sources, and which truly warrant control under the USML.

For example, in subparagraph USML VIII (h) (11), Air-to-air refueling systems and hover-in-flight refueling (HIFR) systems, the use of the phrase .and specially designed parts and components therefor is inappropriate and not in keeping with the objective of ECR to create a more positive list. DDTC should attempt to identify those sub-systems of the refueling system that have unique U.S. defense manufacturing and technology attributes, such as the main refueling boom component. Less consequential parts, not enumerated, such as hoses, seals, supports, and other more easily obtainable parts, should not be caught in the USML. We emphasize that we do not propose that

these parts be decontrolled, only that they be under the licensing authority of BIS under ECCN 9A610.x.

Under the current Category VIII, the overuse of the catch-all phrase results in more PCAA manufacturers falling under both BIS and DDTC licensing authority. Having more non-enumerated PCAs remain on the USML leads to classification errors and compliance burdens for exporters who now must export under two licensing authorities. Additionally, small business vendors and subcontractors are faced with the expense and administrative burden of annual DDTC registration because they may be involved in the manufacture of a few minor catch-all aircraft parts under one of the eight paragraphs of VIII (h).

Conclusion -- Export Control Reform has been an overall benefit to U.S. exporters and has contributed to U.S. competitiveness, while safeguarding U.S. National Security. In general, the use of the term specially designed throughout Category VIII is appropriate to describe end items and parts and components that warrant control under the USML. However, we believe there is an overuse of the catch-all phrase ..and specially designed parts and components therefore; in Category VIII (h). In keeping with the spirit and objectives of Export Control Reform to create a more positive USML, we recommend that DDTC attempt to reduce or eliminate this catch-all phrase and replace with enumerated parts, components, attachments and accessories, which truly warrant control under USML. It should be emphasized that we are not suggesting that these non-enumerated PCAs be decontrolled; only that they be controlled under the licensing authority of BIS under ECCN 9A610.x.

Attachments

[View All \(0\)](#)



Rolls-Royce

ROLLS-ROYCE NORTH AMERICA
450 S Meridian Street, S/C MC-N2-02
Indianapolis, IN 46225-1103

Tel: 317-230-6020
Fax: 317-230-3509
CPD: EX15-0176

Directorate of Defense Trade Controls
Office of Defense Trade Controls Policy
U.S. Department of State
Washington DC

Submittal via email to: DDTCTPublicComments@state.gov

Reference: Docket No. DOS-2014-0030
Request for Comments

Subject: Review of USML Categories VIII and XIX

Dear C. Edward Peartree,

On behalf of Rolls-Royce North America Holdings Inc. (the Company), I am pleased to respond to the March 2, 2015, Federal Register Notice requesting comments on the *Review of USML Categories VIII and XIX*.

The Department requested comment on the following topics, as they relate to Categories VIII and XIX:

1. Emerging and new technologies that are appropriately controlled by one of the referenced categories, but which are not currently described in the control text or not described with sufficient clarity.
2. Defense articles that are described in the control text, but which have entered into normal commercial use since the most recent revisions to the category at issue. For such comments, be sure to include documentation to support claims that defense articles have entered into normal commercial use.
3. Defense articles for which commercial use is proposed, intended, or anticipated in the next five years.
4. Drafting or other technical issues in the text of either of the referenced categories.

The following points are captured under Item 4 as listed above:

1. We find that VIII(h)(1) and XIX(f)(1) capture too many parts and may include tooling. Understanding that classified items are caught elsewhere:
 - o Definitions of accessories, attachments and equipment are vague
 - o Tooling should be treated similarly for all engine types, but licenses have been Returned Without Action (RWA) based on differing definitions and interpretations even with "Specially Designed"
 - o Non-U.S. engines with capabilities similar to those of U.S. engines are not clearly captured. This leads to large disparities in how U.S. engines and non-US engines are treated, despite having similar technology.
2. Defense Services
 - o As items transition from the ITAR to the EAR, it remains unclear how to treat "defense services" as applied to 600 Series items. The history of ECR suggests 600 Series items should be treated as militarily significant, but there is no regulatory justification for applying the "defense services" rationale to 600 Series items.
 - §120.9(a)(1) relates only to defense articles
 - §120.9(a)(2) relates only to technical data included in the ITAR
 - §120.9(a)(3) is vague and captures even public domain information and may capture 600 Series services. This becomes onerous when a US engine is on a non-US platform.
3. See-Through Rule
 - o Placing an ITAR controlled component on an EAR controlled assembly formerly made the entire platform ITAR. Now that the USML is a positive list, it may not capture the platform because it is not enumerated in the ITAR.
 - Example: A Hot Section component for an ITAR controlled gas turbine engine (GTE) is captured under XIX(f)(2). The component meets the requirements of a civil GTE which is not

enumerated on the USML as the GTE does not meet the thrust or shaft horsepower requirements. There is a need to export but there is no enumeration in the ITAR for the GTE.

Overseas industry reports the following:

1. Retransfer issues.

- Great uncertainty over jurisdiction and classification. Rather than overwhelm the system with CJs and CCATs, the U.S. government could consider a no-fault position for incorrect classifications made in good faith.
- Reexports of Transitioned DDTC Authorizations. Although the two-year transitions period for aerospace items expires on October 15, 2015, it remains unclear how firm that deadline may be. Non-U.S. companies would benefit from a statement that they may use DDTC license to reexport transitioned EAR items after October 15, so long as the first export in a chain of exports and Reexports occurred before October 15.

If you require additional information or would like to discuss in greater detail, please contact me at 703.621.2751 or via email at Jeff.Merrell@Rolls-Royce.com or Colin Donahue at 317.230.6854 or via e-mail to Colin.P.Donahue@Rolls-Royce.com.

Sincerely,



William J. Merrell, Vice President
Strategic Export Control Americas
Rolls-Royce North America



Rolls-Royce

Rolls-Royce plc.
62 Buckingham Gate
London SW1E6AT
United Kingdom

30 April 2015

Directorate of Defense Trade Controls
Office of Defense Trade Controls Policy
U.S. Department of State
Washington DC

Submission via email to: DDTCCPublicComments@state.gov
Reference: Docket No. DOS-2014-0030
Request for Comments
Subject: Review of USML Categories VIII and XIX

Dear C. Edward Peartree,

1. On behalf of Rolls-Royce Plc, (Rolls-Royce), I am pleased to respond to the March 2, 2015, Federal Register Notice requesting comments on the Review of USML Categories VIII and XIX.
2. The Department requested comment on the following topics, as they relate to Categories VIII and XIX:
 - a. Emerging and new technologies that are appropriately controlled by one of the referenced categories, but which are not currently described in the control text or not described with sufficient clarity;
 - b. Defense articles that are described in the control text, but which have entered into normal commercial use since the most recent revisions to the category at issue. For such comments, be sure to include documentation to support claims that defense articles have entered into normal commercial use;
 - c. Defense articles for which commercial use is proposed, intended, or anticipated in the next five years; and
 - d. Drafting or other technical issues in the text of either of the referenced categories.
3. In general terms, Rolls-Royce would like to make the following points:
 - a. we find that VIII(h)(1) and XIX(f)(1) capture more parts than we originally envisaged under the reforms and may include tooling. Was this the intention?

- b. it would be useful if definitions of accessories, attachments and equipment could be even more explicit;
- c. we believe it would be helpful if tooling could be treated similarly for all engine types. There remains a risk that some licenses could be Returned Without Action (RWA) based on differing definitions and interpretations even with “Specially Designed”; and
- d. Non-U.S. engines with capabilities similar to those of U.S. engines are not clearly captured. This leads to large disparities in how U.S. engines and non-US engines are treated, despite having similar technology.

Defense Services

4. It would be extremely helpful if there were an even clearer definition and guidance for Defense Services. As items transitioned from the ITAR to the EAR, the direction sometimes remains unclear how to treat “defense services” as applied to 600 series items. The history of Export Control Reform suggests 600 series items should be treated as militarily significant, but there does not appear to be any clear guidance or justification for applying the “defense services” rationale to 600-series items. For example:

- §120.9(a)(1) relates only to defense articles;
- §120.9(a)(2) relates only to technical data included in the ITAR; and
- §120.9(a)(3) is somewhat vague and captures even public domain information and may capture 600 Series services.

5. Rolls-Royce understands a third proposed rule for public comment is expected later this year and looks forward to assessing the details.

See-Through Rule

6. Placing an ITAR controlled component on an EAR controlled assembly once made the entire platform ITAR. Now that the USML is a positive list, it may not capture the platform because it is not enumerated in the ITAR. For example, a Hot Section component for an ITAR controlled gas turbine engine (GTE) is captured under XIX(f)(2). The component meets the requirements of a civil GTE which is not enumerated as the GTE does not meet the thrust or shaft horsepower requirements. There is a need to export, but there is no enumeration in the ITAR for the GTE.

Jurisdiction/Classification – Steps to Facilitate Self-Determination

7. BIS and Dept of State has been encouraging non-U.S. companies to make their own determination of jurisdiction and classification for transitioning items. This has been a significant concern and challenge for non-U.S. defense industry participants in Europe; both end manufacturers and suppliers. Simply put, companies are fearful of U.S. enforcement activities for well-meaning attempts to classify, particularly where they have been unable to get a US supplier to provide a classification or the information necessary to undertake self-determination. Rolls-Royce is aware of the recent US Government response to an enquiry by the UK Export Group for Aerospace and Defence (EGAD) stating that non-US recipients, not just the OEM,

may proceed with self-classifications where such information cannot be obtained from the original US source. However, the risks of getting such self-classifications wrong were also emphasized. Addressing this concern correctly will ease the burden both on BIS and DDTC in responding to CJ and CCATS, as well as on U.S. manufacturers or exporters who will be approached repeatedly for written assurances from UK companies, such as Rolls-Royce plc, which may lead to additional U.S. CJ and CCATS requests.

8. Rolls-Royce therefore encourages BIS to coordinate with DDTC and provide additional guidance for non-U.S. companies in terms of what they think is reasonable and proportionate when undertaking self-classifications, particularly when they simply cannot get the information required from the US supplier/exporter.

9. More importantly, we would urge BIS and DDTC to consider taking steps to encourage U.S. suppliers/exporters to provide complete classification information to UK industry and other non-U.S. parties. It would be particularly helpful if U.S. industry could be informed that they should proactively provide full classification information, including any provisos or license restrictions, to foreign recipients and that they should fully co-operate should recipients request information if they have to undertake their own self-classifications.

Re-exports of Transitioned Items Under DDTC Authorizations

10. Many DDTC licenses and authorizations are nearing the end of their two year period of validity for items, software and technical data that have transitioned to EAR control. Some of these DDTC licenses or authorizations provided for multiple steps for manufacture and subsequent re-exports. It is clear that new exports would not be permitted after the two year transitional period (or if the license or agreement otherwise expires). It is still not fully clear whether a string of exports and re-exports, if begun prior to the effective date of ECR or during the two year transition period, can be completed afterwards. We would therefore encourage BIS and DDTC to allow further re-transfers under the original DDTC license in such circumstances provided the DDTC license remains valid.

11. If you require additional information or would like to discuss in greater detail, please contact me at +44 117 979 4278 or via email at Warren.Bayliss2@Rolls-Royce.com

Yours Sincerely,



Warren Bayliss
Head of Export Controls – Defence Aerospace



May 1, 2015

Mr. C. Edward Peartree, Director
Office of Defense Trade Controls Policy
Directorate of Defense Trade Controls
Department of State
SA-1, 12th Floor
Washington, DC 20522-0112

Subject: Review of USML Categories VIII and XIX

Reference: Federal Register/ Vol. 80, No. 40/ Monday, March 2, 2015/ Notice of Inquiry: Request for Comments Regarding Review of United States Munitions List Categories VIII and XIX

Dear Mr. Peartree,

The Boeing Company (“Boeing”) appreciates the opportunity to provide comments on the controls implemented in recent revisions to Categories VIII and XIX of the United States Munitions List (“USML”). We strongly support the Directorate of Defense Trade Controls (“DDTC”) plan to periodically review the USML to ensure that controls are clear, account for technological developments, and properly implement national security and foreign policy objectives.

Boeing thanks the Department of State, as well as the Departments of Commerce and Defense, for their sustained efforts to revise the control lists. The reforms have strengthened implementation of U.S. national security while also creating benefits in terms of focus on critical technologies and licensing simplification. Boeing’s approach is to consider that the USML and Commerce Control List (“CCL”) comprise in essence one combined list. Our comments are intended to add clarity and promote consistent application of the regulations.

Boeing’s comments address Category VIII controls on mission systems, inertial reference systems, development projects, and (h)(1) controls on aircraft parts, components, accessories, and attachments. The Federal Register notice speaks of avoiding inadvertent USML control of items in normal commercial use and, as explained below, we believe Categories VIII and XIX still capture items that do not warrant USML control regardless of whether an item has reached the stage of normal commercial use. We comment on gearbox controls, thermal engines, and propose “see through rule” relief for Category XIX. Finally, a discussion of certain definitions that are essential to classifying Category VIII and XIX items, particularly in the application of the specially designed releases, is presented.



Specific Comments:

VIII(a)(11) Aircraft incorporating any mission system controlled under this subchapter

The USML controls aircraft in VIII(a) according to their military characteristics (e.g. fighters, attack) and adds a control in entry (11) for “Aircraft incorporating any *mission system* controlled under this subchapter.” (Italics added.) *Mission systems* are defined as systems that are “defense articles that perform specific military functions such as by providing military communication, electronic warfare, target designation, surveillance, target detection, or sensor capabilities”.

The (a)(11) control is not needed because mission systems are by definition defense articles whose export, re-export or transfer already require International Traffic in Arms (“ITAR”) authorization. This remains the case even when incorporated into a non-ITAR item by application of the “see through” rule. For example, under existing process, exporters use a Bureau of Industry and Security (“BIS”) authorization for the aircraft platform, and also obtain the appropriate DDTC license for the defense article; in this way DDTC retains control over the defense article export. This licensing scenario is not new and existed pre-Export Control Reform (“ECR”); exporters are required to seek ITAR authorizations for any defense article that is incorporated into a non-ITAR item.

Additionally, transforming an Export Administration Regulations (“EAR”) platform into a defense article because it contains a *mission system* creates problems related to defense services, licensing, and Congressional Notification (“CN”) thresholds. If a USML XI(a)(5) communications capability is deemed a *mission system* and incorporated into a 9A610 aircraft, the entire 9A610 platform would become ITAR controlled under (a)(11). If DDTC considers services performed on any part of the aircraft to be “defense services”¹, then a license is required for any person anywhere that works on the aircraft no matter how minor or attenuated from the communications system. Basic in-service maintenance like replacing a fuel hose or repairing a seat track (EAR-controlled items) will require a Technical Assistance Agreement, representing a burden to industry as well as to DDTC. In accordance with a Frequently Asked Question on the DDTC website, CN values for (a)(11) items must include the platform value, thus the incorporation of a \$1 million defense article into an EAR-controlled platform can easily trigger the \$50 million CN threshold, leading to additional cost and delay.

The control is also not clear regarding what specific items are considered to be *mission systems*. The definition refers to defense articles that perform *specific military functions*, then provides an illustrative, but not definitive list. The ITAR does not define *specific military function*. Therefore the potential exists for differing interpretations. For example:

¹ A position that Boeing does not agree with, but which a recent trade article suggests DDTC is considering.



- One could surmise that all enumerated defense articles are *mission systems*, e.g. everything in VIII(h);
- Another interpretation could be that only defense articles whose control text uses the term “system” are *mission systems*;
- One could also read the definition to imply that items listed in the Note at the end of VIII are not *mission systems* since they are not ITAR controlled when incorporated into 9A610 aircraft. But some items left out of the Note are not described as “systems”, e.g. (h)(6) bomb racks, and (h)(16) computers.

These examples show that there are multiple ways to construe the *mission systems* control text, which does not support the goal of stable and consistent regulatory interpretations.

Recommendation:

Given the redundant control outlined above that is presented by (a)(11) and the confusion related to the associated concept of *mission systems*, DDTC should delete (a)(11) and the associated Notes, including the *mission systems* definition.

VIII(e) Inertial Navigation Systems (INS)

Inertial reference systems are captured in three different ITAR categories, namely Categories VIII, XII and XV. Where Category XV addresses receiving equipment, Categories VIII and XII both address various guidance and reference systems. This can lead to confusion and misclassification between Categories VIII and XII in particular.

Recommendation:

Delete VIII(e) and combine all inertial reference systems and related components into Category XII, Fire Control, Range Finder, Optical and guidance and Control Equipment. Additionally, add a reference in XII(d) directing associated receiving equipment to Category XV. XII(d) would then read as follows:

(d) Inertial platforms and sensors for weapons or weapon systems; guidance, control and stabilization systems ~~except for those systems covered in Category VIII~~; astro-compasses and star trackers and military accelerometers and gyros. ~~For aircraft inertial reference systems and related components refer to Category VIII.~~ **Inertial navigation systems (INS), aided or hybrid inertial navigation systems, Inertial Measurement Units (IMUs), and Attitude and Heading Reference Systems (AHRS) specially designed for aircraft controlled in Category VIII or controlled in ECCN 9A610 and all specially designed components, parts, and accessories therefor (MT if the INS, IMU, or AHRS is for an unmanned aerial vehicle, drone, or missile that has a “range” equal to or greater than 300 km). For Global Positioning System (GPS) receiving equipment and related components refer to Category XV.*



VIII(f) Developmental Projects

Paragraph (f) of Category VIII addresses developmental aircraft and is triggered by Department of Defense (“DoD”) contracts dated April 16, 2014 or later, as stated by Note 3. This is six months after the effective date for Category VIII as a whole. Boeing understands from an FAQ posted on the DDTC website that the intent of Note 3 language was for DoD contract amendments to trigger the control in VIII(f). During this six-month period, it is possible that U.S. exporters experienced certain items shift from being ITAR-controlled before Final Rule effective date, to EAR-controlled after Final Rule effective date, and then back to ITAR control on the date of a DoD contract amendment. Currently it is understood as well that *any* amendment may trigger the control, not just those with scope changes adding new developmental aircraft defense articles and/or specially designed parts, components, accessories, and attachments. Therefore, in the interest of clarity and consistent application of the regulations, we recommend VIII(f) be clarified with respect to amendments. DoD contract amendments addressing administrative aspects should not be treated the same as substantive scope changes since they do not initiate new defense article development work.

Also Boeing understands the intent of VIII(f) was to capture only developmental aircraft of the types positively listed in VIII(a) and not all military aircraft listed in CCL 9A610.a. Developmental aircraft aligned with 9A610 such as trainer or cargo aircraft should likewise not be caught under VIII(f). However, the text of VIII(f) is not clear on this distinction and could be updated to prevent over-control.

Recommendations:

Modify the text of Note 3 to Paragraph (f) to clarify amendments and read as follows:

NOTE 3 to PARAGRAPH (f): This provision is applicable to those contracts, ~~or~~ other funding authorizations, **or modifications initiating development of a new defense article** that are dated April 16, 2014, or later.

Modify the text of VIII(f) to address VIII(a) aircraft only and read as follows:

VIII(f) Developmental aircraft **of the types described in VIII(a)(1-16)** funded by the Department of Defense via contract or other funding authorization, and specially designed parts, components, accessories, and attachments therefor.

VIII(h) Advanced US-origin Aircraft



VIII(h) captures critical technologies associated with U.S.-origin advanced aircraft platforms. Boeing understands controlling the technical and performance aspects of the listed aircraft which make them unique. The challenge, however, is that the current regulatory language in VIII(h)(1) captures many parts, components, attachments and accessories (“PCAA”) which do not warrant this critical level of control. Under the current construct, the test for *any* PCAA associated with the platform aircraft specified is a commonality test. This test can often prove impractical as can be seen with the following example for wing ribs.

Wing Rib Example: F/A-18 E/F/G is structurally a larger aircraft than its predecessor variants F/A-18 A/B/C/D. As a result an internal aluminum structure of a wing rib is a couple inches longer. Given the design change, the regulatory language in VIII(h)(1) catches the wing rib under the ITAR since it is not common to earlier models. All airplanes with wings have ribs in the wing structure. The wing rib on the F/A-18 E/F/G does not have low observability features or characteristics. The A/B/C/D rib would be EAR 9A610.x. For E/F/G it is caught under VIII(h)(1) because it is not “common” to earlier models.

Many other less significant PCAA are being caught, for example the simple wire bundles that only carry power to external navigation lights are “not common” because they are a different length or have different connectors.

The regulatory text currently reads as follows:

VIII(h) Aircraft parts, components, accessories, attachments, associated equipment and systems, as follows:

(1) Parts, components, accessories, attachments, and equipment specially designed for the following U.S.-origin aircraft: the B-1B, B-2, F-15SE, F/A-18 E/F/G, F-22, F-35 and future variants thereof; or the F-117 or U.S. Government technology demonstrators. Parts, components, accessories, attachments, and equipment of the F-15SE and F/A-18 E/F/G that are common to earlier models of these aircraft, unless listed in paragraph (h) of this category, are subject to the EAR;

NOTE TO PARAGRAPH (h)(1): Specially designed (see §120.4(b)(3)(ii) of this subchapter) does not control parts, components, accessories, and attachments that are common to aircraft described in paragraph (a) of this category but not identified in paragraph (h)(1), and those identified in paragraph (h)(1). For example, a part common to only the F-14 and F-35 is not specially designed for purposes of the ITAR. A part common to only the F-22 and F-35—two aircraft models identified in paragraph (h)(1)—is specially designed.

When the Final Rule was issued for the provisions in VIII(h), the Federal Register Notice noted that the revised Category VIII did not contain controls on all generic PCAA specifically designed or modified but rather it contained one principal exception. That exception was stated as



pertaining to PCAA “specially designed” for the identified U.S.-origin aircraft that have low observable features or characteristics. All other PCAA specially designed for a military aircraft were to be subject to the new “600 series” controls in Category 9 of the CCL. Boeing believes this intent to address low observable features or characteristics is appropriate and should be clarified in VIII(h). This clarification would provide a bright line for PCAA controlled under Category VIII(h)(1) versus those subject to the controls of the EAR.

Recommendation:

For the reasons explained above, Boeing requests consideration of the following changes to VIII(h)(1):

(1) Parts, components, accessories, attachments, and equipment specially designed to contribute to the low observable features or characteristics of ~~for~~ the following U.S.-origin aircraft: the B-1B, B-2, F-15SE, F/A-18 E/F/G, F-22, F-35 and future variants thereof; or the F-117 or U.S. Government technology demonstrators. Parts, components, accessories, attachments, and equipment of the F-15SE and F/A-18 E/F/G that are common to earlier models of these aircraft, unless listed in paragraph (h) of this category, are subject to the EAR;

Dual Use Nature of Some USML-listed Items

Boeing understands the USML as the means of controlling items with an exclusively military function. As we have commented previously, several items listed in Category VIII are used or have been developed for use in commercial aircraft and therefore are not inherently military. DDTC has been responsive in providing relief for commercial items in or nearing production which are also described on the USML such as Lithium-ion batteries and wing folding systems, which we greatly appreciate. But the apparent policy of maintaining ITAR control of selected dual-use items until they are committed to commercial production results in having to treat commercial product development data as ITAR during what can be a lengthy development phase, often ten years or more. The root technologies are already commercially available and globally accessible for the items we list below.

VIII(h)(4) Wing folding systems: A folding wing is a configuration that allows for space savings. They are used on military aircraft to fit onto carrier decks, on general aviation airplanes to fit into hangars, and by commercial airplanes to allow longer fuel-efficient wingspans to accommodate existing gates and runways. Boeing Commercial Airplanes has twenty years of commercial wing fold development activity:



- a system developed in the mid-1990s for the 777-200 airplane – this was fully developed, a prototype was built and tested, and it was offered as an option to customers who did not purchase it due to its added weight;
- a system developed for our newest commercial aircraft, the 777X – this was removed from ITAR control through a Commodity Jurisdiction and a subsequent regulatory revision;
- future systems are under active consideration for single-aisle aircraft

Wing folding is not a uniquely military capability. In the commercial context it can be accomplished with latch and lock technology that is widely available in the public domain. General technical competencies required include failure hazard assessment and system performance requirements such as timing and availability; performance failure modes and effects analysis at single part level, fault tree analysis to combine individual failures into complete system, and product validation and verification via test, analysis, etc. These competencies are used globally by aerospace firms.

VIII(h)(13) Aircraft Lithium-ion batteries: Modern commercial aircraft are relying increasingly on electrical power sources to energize flight and passenger systems. This has driven increasing demand on electrical power storage and energy delivery. In order to satisfy the electrical requirements, higher capacity and more powerful batteries will be required. Boeing believes the automotive industry is leading the development of batteries of this type and sees no benefit to national security accruing from the control of the same technology when applied only to aircraft structures.

Recommendation:

Establish a technical working group under the Defense Trade Advisory Group, the Bureau of Industry and Security Transportation Technical Advisory Committee (“TransTAC”), or create an interagency technical advisory committee to include the Departments of State, Commerce, and Defense to provide in-depth analysis and recommendations to revise USML and CCL listings on commercial applications. The TransTAC working group on gearboxes has been effective in working with industry to reconsider the control parameters for gearboxes in VIII (h)(2) to distinguish exclusively military gearboxes. Boeing applauds that work and supports continued efforts to establish purely military control parameters in other areas.

VIII(h)(2) gearboxes and VIII(h)(18) drive systems

The VIII(h)(2)² control uses pitch line velocity and loss of lubrication as criteria for ITAR control of the listed gearboxes (the current text of (h)(2) and (h)(3) is not limited to rotary wing aircraft but DDTC guidance has indicated this is the case). However, both of these characteristics have been the focus of technology development over the last decade because of their importance to efficiency and safety for both military and commercial aircraft. Improvements in pitch line velocity, which relates to power density, result in lighter designs with increased reliability and maintainability which are beneficial to all users – meaning that the associated hardware is not specifically military in nature. The ability to operate after loss of lubrication is a safety feature in both military and commercial contexts; in fact Federal Aviation Administration (“FAA”) regulations require at least a 30-minute flight capability for Category A passenger aircraft. This feature is also not unique to military helicopters. In contrast, ballistic resistance, the criteria used in VIII(h)(18), is a military-unique feature for drive trains and gearboxes³ and therefore is an appropriate control criteria in this case.

Recommendation:

In order to avoid inadvertent capture of gearboxes in normal commercial use, delete VIII(h)(2) and expand VIII(h)(18) to control ballistic resistant gearbox parts and components in addition to systems as follows:

“(18) Drive systems, ~~and~~ flight control systems, **and parts and components therefor** specially designed to function after impact of a 7.62mm or larger projectile.”

VIII(h)(24) Thermal engines specially designed for aircraft controlled in this category or controlled in ECCN 9A610

VIII(h)(24) introduces the term ‘thermal engine’. However, without a definition, it is difficult to understand the intended controls. The nearest definition that appears applicable is that for ‘heat engine – an engine that converts heat energy into mechanical energy’⁴. The definition of ‘heat engine’ covers many thermodynamic cycles including the Brayton cycle which is used in gas turbine engines. If DDTC intends to control specially designed heat engines in this listing, there is significant overlap with gas turbine engines covered under Category XIX.

² (2) Face gear gearboxes, split-torque gearboxes, variable speed gearboxes, synchronization shafts, interconnecting drive shafts, or rotorcraft gearboxes with internal pitch line velocities exceeding 20,000 feet per minute and able to operate 30 minutes with loss of lubrication, and specially designed parts and components therefor;

³ Ballistic resistance broadly is not a uniquely military feature: as a safety feature for commercial airplanes both the flight deck door and bulkhead are ballistic resistant.

⁴ Collins English Dictionary – Complete and Unabridged © HarperCollins Publishers 1991, 1994, 1998, 2000, 2003



Additionally, in some cases (h)(24) now captures engines which were previously subject to the EAR. For example, Boeing currently interprets (h)(24) as including internal combustion engines. Prior to Export Control Reform, VIII(a) specifically excluded reciprocating internal combustion engines from the ITAR. Boeing subsidiary Insitu uses this type of engine for its Category VIII(a)(5) Unmanned Aerial Vehicle (UAV). They are comprised of predominantly EAR parts and components and had previously been subject to the EAR under ECCN 9A991. Boeing and Insitu believe that movement of these EAR engines to the ITAR has resulted in an over control of small cubic centimeters or cm³ (“cc”) UAV engines (e.g., 20 to 100 cc). They do not warrant the same level of control as engines used on fighters, fighter bombers, fixed wing attack aircraft, attack helicopters, armed UAV, aircraft capable of air refueling, target drones, or optional piloted vehicles of far greater capabilities, reliability and lifecycle. ITAR control of small cc engines impacts our ability to overhaul and replace our low-specification flight time dual use engine for replacement, without long turn times for customers, keeping the aircraft in operation.

Recommendation:

Clarify VIII(h)(24) by providing a clear definition for ‘thermal engine’. Without more insight into the reason for control, we are not able to propose a definition, but recommend that the entry distinguish engines in Category XIX and also carve out reciprocating internal combustion engines no greater than 200 cc, 50 HP for EAR control.

Addition of a Note to USML Category XIX

USML Category VIII contains a Note which provides relief to the “see through rule” for certain items controlled in the Category, when incorporated in a military aircraft subject to the EAR and classified under ECCN 9A610. Replacement systems, parts, components, accessories and attachments for such items remain subject to the controls of the ITAR. Boeing believes that a similar note in Category XIX was intended when the Category was originally published, but was inadvertently overlooked. Providing a similar note in Category XIX would allow certain aircraft that are currently controlled on the ITAR only because of their engines to be classified and exported under the controls of ECCN 9A610. Boeing believes that adding this note to Category XIX meets the intent and spirit of the export control reform initiative and therefore makes the following recommendation.

Recommendation:

Addition of a new note at the end of Category XIX similar to that in Category VIII, which would read as follows:

NOTE: Gas turbine engines and associated equipment in paragraphs (a) through (f) are licensed by the Department of Commerce when incorporated in a military aircraft



subject to the EAR and classified under ECCN 9A610. Replacement engines, systems, parts, components, accessories and attachments are subject to the controls of the ITAR.

120.45 definitions of end items, components, accessories, attachments, parts, systems and equipment

In determining the applicability Category VIII controls, key terms are used to determine whether releases are available in the *pecially designed* definition. Because several of the term definitions overlap (perhaps unavoidably given their prevalence on the control lists), exporters may be applying the definitions in different ways. For example, applying different concepts of ‘intended use’ when deciding what is an ‘end item’ or taking different approaches to application of the *pecially designed* releases when a component also meets the definition of system. In order to maximize consistent application of the terms, Boeing provides our analysis of their interrelationships and the resulting conclusions with respect to the “specially designed” definition. We also recommend slight revisions to the definitions to promote consistent understanding.

a) Equipment and System

The current regulatory text is:

Equipment. This is a **combination of parts, components, accessories, attachments, firmware, or software that operate together to perform a function** of, as, or for an end item or system. Equipment may be a subset of an end item based on the characteristics of the equipment. Equipment that meets the definition of an end-item is an end-item. Equipment that does not meet the definition of an end-item is a, component, accessory, attachment, firmware, or software.

A *system* is a **combination of parts, components, accessories, attachments, firmware, software, equipment, or end-items that operate together to perform a function.**

The definition of equipment contains the definition of system (see bolded text) and provides additional criteria to further identify which items meet the definition. If you replace the bolded text in the equipment definition with the term you get the following version of equipment:

Equipment is a system of, as, or for an end item or system.

Accordingly, it follows that the sets of equipment and system are the same. Boeing is not recommending consolidation of the two terms, rather clarification is needed so that industry can classify systems and equipment with confidence.

b) End item



The current regulatory text is:

End item. This is a system, equipment, or assembled commodity ready for its intended use. Only ammunition, fuel or other energy source is required to place it in an operating state.

This definition creates considerable variability as to what constitutes ‘intended use’. One could interpret the intended use of a specific gas turbine engine as ‘to produce thrust’ or alternatively ‘to propel a commercial aircraft’. In the first instance, the engine alone would be an end item; in the latter case the same engine would be a component of the aircraft. Because status as an end item vs. component is key to the applicability of the *specially designed* releases, clarity of the ‘end item’ definition is very important.

A definitional parameter establishing the level of an end item’s integration, in addition to readiness for intended use, would add clarity. In this way, and ‘end item’ represents the highest level of integration, and ‘intended use’ is not simply to function (thrust) but to function within an item which will not be further integrated (propel an aircraft). The implication is that no aircraft ‘components’ or ‘parts’ would be ‘end items’ (the definitions are exclusive if we accept the proposed interpretation of ‘intended use’). In the example provided only the aircraft is an ‘end-item’ ready for its intended use.

Recommendation:

Revise the definition of ‘end item’ as follows:

End item. This is a system, equipment, or assembled commodity **that has reached its highest level of integration and is** ready for its intended use. Only ammunition, fuel or other energy source is required to place it in an operating state.

c) Equipment

Because an ‘end item’ is defined as ‘equipment’ which is further qualified by its readiness for intended use, the set of ‘end items’ is a subset of ‘equipment’. Confusion is introduced by the second sentence of the ‘equipment’ definition because it suggests the opposite – that ‘equipment’ is a subset of ‘end items’. The third sentence: ‘Equipment that meets the definition of an end-item is an end-item’ is consistent with the notion that end items are a subset of equipment.

Recommendation:

Delete the second sentence of the definition as follows:

Equipment. This is a combination of parts, components, accessories, attachments, firmware, or software that operate together to perform a function of, as, or for an end item or system.
~~Equipment may be a subset of “end items” based on the characteristics of the equipment.~~



Equipment that meets the definition of an end-item is an end-item. Equipment that does not meet the definition of an end-item is a component, accessory, attachment, firmware, or software.

d) Component

The current regulatory text is:

A *component* is an item that is useful only when used in conjunction with an end-item. A major component includes any assembled element that forms a portion of an end-item without which the end-item is inoperable. A minor component includes any assembled element of a major component.

A component needs to be further integrated before it can fulfill its intended use. An example of a 'component' is a functional aircraft navigation system ready for installation on an aircraft. Even though the navigation system is ready, if provided power, to navigate on the bench top, it needs to be further integrated into a larger system in order to satisfy its intended use (aircraft navigation). In this case, the navigation system does not satisfy the definition of 'end item' even though it may be enumerated specifically in a control listing. Within that framework, the navigation system is a 'component'. By contrast, a hand-held GPS system is a combination of elements which will not be further integrated, is ready for its intended use, and is therefore an 'end item'.

Recommendation:

Consistent with the clarification of using level of integration to differentiate 'end items' from 'components', revise the definition of 'component' as follows:

A *component* is an item that is useful only when ~~used in conjunction with~~ **incorporated into** an end-item. A major component includes any assembled element that forms a portion of an end-item without which the end-item is inoperable. A minor component includes any assembled element of a major component.

e) Accessories and attachments

The current regulatory text is:

Accessories and *attachments* are associated articles for any component, equipment, system, or end-item, and which are not necessary for its operation, but which enhance its usefulness or effectiveness.



Because accessories/attachments are items that are useful only when used in conjunction they satisfy the definition of components. There are listings within category VIII which only address components rather than accessories/attachments and it is unclear if those listings are intended to cover accessories. For example:

(h)(3) Tail boom folding systems, stabilator folding systems or automatic rotor blade folding systems, and specially designed parts and components therefor; (emphasis added)

Recommendation:

Further revise the definition of ‘component’ to preclude accessories:

A *component* is an item that is useful only when ~~used in conjunction with~~ **incorporated into** an end-item. **All components are either “major” or “minor”.** A major component includes any assembled element that forms a portion of an end-item without which the end-item is inoperable. A minor component includes any assembled element of a major component.

f) Conclusions

The above definitions necessarily overlap to a certain extent and our comments are not intended to criticize or preclude that reality. The three minor revisions to the definitions of ‘end item’, ‘equipment’ and ‘component’ proposed would add clarity and thus more consistent application. These terms are very consequential for classification, which in turn impacts many subsequent decisions, such as the applicability of exceptions and license requirements. The conclusions resulting from the above analysis are that:

- an end item is an article that has reached its highest level of integration;
- equipment that is not an end item (at highest level of integration) is eligible for the paragraph (b) releases in the specially designed definition;
- systems and equipment describe the same set of items;
- a system that is not an end item (at highest level of integration) is eligible for the paragraph (b) releases in the specially designed definition.

Recommendation:

Develop and publish guidance to enable exporters to apply the definitions and the “specially designed” releases consistently and compliantly.

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 email at christopher.e.haave@boeing.com.



Mr. Edward Peartree
Page 14

Sincerely,

A handwritten signature in black ink that reads "Christopher Haave". The signature is fluid and cursive, with a prominent loop at the end.

Christopher Haave
Director, Global Trade Controls



April 29, 2015

Mr. C. Edward Peartree,
Office of Defense Trade Controls Policy, Bureau of Political-
Military Affairs, U.S. Department of State.
Washington, D.C.

VIA E-MAIL: *DDTCpublicComments@state.gov*

Re: Notice of Inquiry - Review of USML Categories VIII and XIX

Dear Mr. Peartree:

The Chemours Company, a wholly-owned subsidiary of DuPont, wishes to provide comments in response to the Notice of Inquiry concerning the Review of USML Categories VIII and XIX published in the Federal Register on March 2, 2015. Our comments focus on topic item # 3 enumerated in the FR notice as follows:

Defense articles for which commercial use is proposed, intended, or anticipated in the next five years.

The Chemours Company produces a fluorinated grease and a fluorinated oil that are "specially designed" for use in the F-35 platform and are thus controlled in Category VIII(h). The fluorinated grease was formulated to handle high fretting loads (as was projected for the rotation gearboxes for the JSF (F-35B STOVL variant). The fluorinated grease provides a virtually maintenance-free gearbox but does not contribute to any of the unique performance characteristics of the JSF. This product formulation has potential commercial value in a variety of civil aircraft applications including serving as a maintenance aid in spline shafts, bushings, high-temperature control valves, low speed bearings, and small severe-duty gearboxes like the current ITAR application. There is also a need for this product in industrial applications with moderate to severe fretting such as vibrating equipment that have performance problems with moving joints or bearings. Chemours sees the opportunity to provide this grease to the commercial aircraft and other industrial markets. We project that commercial sales would be three orders of magnitude greater than the current sales to the JSF program.

The fluorinated oil was formulated to provide corrosion protection for the three bearing swivel module ("3BSM") bearings while the assembly "sits on the shelf" prior to inspection and insertion into the 3BSM. This product is also compatible with the lubricant that is put into the 3BSM assembly and provides lubrication for the assembly while it is in service in the aircraft. The service lubricant is an off-the-shelf, commercial fluorinated lubricant, which is not an ITAR product. The ITAR-controlled fluorinated oil serves as an aid to assembly and does not contribute to the unique performance characteristics of the JSF. The fluorinated oil could potentially find use with bearing manufacturers as an alternative to traditional slushing

compounds when compatibility with a fluorinated in-use lubricant is required. This particular formula should result in a more durable coating allowing a rust preventative coating to last longer than the typical three months of current anti-corrosion oils. Chemours projects that commercial sales to the industrial bearings market would be three orders of magnitude of the current sales to the JSF program.

We have had requests for each of these products from bearing manufacturers and grease formulators. They were not willing to share their end uses with us and the ITAR restrictions convinced them not to pursue evaluation of the products.

We believe that these products are examples of articles that provide useful qualities for the maintenance or shelf-life of aircraft parts, but do have or contribute to properties peculiarly responsible for ITAR-controlled performance levels, characteristics or functions of the aircraft and should be subject to control pursuant to the Export Administration Regulations and more readily available for use in commercial applications.

Sincerely yours,

/s/ Pedro de la Torre

Pedro de la Torre
Global Compliance Counsel
The Chemours Company, LLC

Good Morning-

The addition of the term “ specially designed” to VIII(h)(2) would greatly clarify that section. At this point we have to obtain verification on gearboxes on commercial programs, that they are not any of the controlled gearboxes.

Regards,

Melissa Bean | Export Compliance Manager

The Lee Company

2 Pettipaug Rd | Westbrook, CT 06498

P: 860.399.6281 x2526 | F: 860.399.2270



May 1, 2105

SUBMITTED VIA EMAIL TO: DDTCPUBLICCOMMENTS@STATE.GOV

Mr. C. Edward Peartree
Director
Office of Defense Trade Controls Policy
Department of State
2401 E Street NW, SA-1, Room H1200
Washington, D.C. 20037

RE: Request for Comments Regarding Review of Categories VIII and XIX
(80 FR 11314, dated March 2, 2015)

Dear Mr. Peartree:

On behalf of The Timken Company (“Timken”), we are pleased to provide these comments responding to the Request for Comments Regarding Review of U.S. Munitions List (“USML”) Categories VIII and XIX, administered by the Directorate of Defense Trade Controls (“DDTC”).

Timken believes that bearings for AHRS, INS, and gyroscopes described in current Category VIII(e) should not be subject to significant military equipment (“SME”) requirements on the USML. Precision bearings are generally made with the same processes, meet the same commercial industrial standards, and have the same functionality for both commercial and USML avionics even if a Category VIII(e) bearing is not released from the catch-all clause of Category VIII(e) pursuant to the equivalent standard release under (b)(3) or the design intent release under (b)(4).

Timken believes bearings for use in or with the manufacture of AHRS, INS, and gyroscopes should remain subject to only a catch-all clause under the USML. Category XII should not be amended to provide an enumerated clause that describes bearings as parts for enumerated gyroscopes, AHRS, or INS that operate at defined performance parameters. The catch and release provisions for bearings better achieve the goals of Export Control Reform to exclude from the USML items in normal commercial use over time. Commercial avionics has and will continue to evolve quickly to improve safety and efficiency of commercial flight.

Catch and Release Provisions of VIII(e)

Timken recommends to DDTC that the Administration should exclude bearings from the broad references to parts and components in Category VIII(e), add bearings to ECCN 9A610.y, and refrain from describing bearings in a proposal to revise Category XII.

If the Administration is not willing to exclude bearings from the broad references to parts and components in Category VIII(e), Timken respectfully submits that the catch and release provisions

TIMKEN

Mr. C. Edward Peartree
May 1, 2015
Page 2

applicable to Category VIII(e) are better suited to maintain pace with technology developments in navigation avionics than an enumerated clause with performance criteria for navigation equipment under proposed changes to Category XII. We anticipate that the Administration will not establish performance criteria for the bearings themselves.

We appreciate the strategy of DDTC periodically to review Category VIII, and Timken understands the preference of DDTC and the Administration to use enumerated performance criteria where possible. However, there are reasons this policy-making strategy is not the better alternative when compared to the catch and release provisions of Category VIII(e). In anticipation of publication of a revised Category XII, Timken is gathering information regarding common commercial use of bearings in gyroscopes, AHRS, and INS equipment and will comment further on Category XII when it is published.

Sincerely,



S. Ryan Hartong
Principal Analyst Trade Compliance
The Timken Company

United Technologies Corporation
1101 Pennsylvania Avenue, N.W.
10th Floor
Washington, D.C. 20004-2545



Submitted Via Email

May 1, 2015

Mr. C. Edward Peartree
Director, Office of Defense Trade Controls Policy
Directorate of Defense Trade Controls
PM/DDTC, SA-1, 12th Floor
Bureau of Political Military Affairs
U.S. Department of State
Washington, D.C. 20522-0112

Attn: Review of USML Categories VIII and XIX

Re: Notice in Inquiry; Request for Comments Regarding Review of United States Munitions List Categories VIII and XIX (80 Fed. Reg. 11314, March 2, 2015)

Dear Mr. Peartree:

United Technologies Corporation (“UTC”)¹ appreciates the opportunity to submit these comments on the implementation of Export Control Reform (“ECR”) with respect to military aircraft and military gas turbine engines. UTC strongly supports the Administration’s goals of creating a positive, transparent and predictable structure within the categories of the U.S. Munitions List (“USML”), and continually aligning this structure and associated export control policies with changing technological and market conditions. As described in more detail below, UTC believes that the existing control text in USML Categories VIII and XIX should be updated and clarified to better support these goals.

I. USML Category VIII(a) – Aircraft

UTC supports the transfer of certain military transport and utility helicopters from the USML to the Commerce Control List (“CCL”). Transfer of these types of aircraft is consistent with the Administration’s export control reform objective to create control lists that accurately reflect contemporary national security and foreign policy objectives. The existing language in USML Category VIII(a) continues to capture certain military aircraft that would be more appropriately controlled on the CCL under Export Control Classification Numbers (“ECCN”) 9A610.a, and also captures civil aircraft equipped with certain USML systems for search and rescue (“SAR”) capability. UTC recommends the following changes to USML Category VIII(a) to align the control structure with the intent of ECR in respect to military utility and SAR-equipped civil rotorcraft.

¹ UTC is a global, diversified corporation based in Hartford, Connecticut, supplying high technology products and services to the aerospace and building systems industries. UTC’s companies are industry leaders, among them Pratt & Whitney, Sikorsky, UTC Aerospace Systems, UTC Building & Industrial Systems, and United Technologies Research Center.

A. Delete or Amend USML Category VIII(a)(11)

UTC respectfully suggests that DDTC delete or amend Category VIII(a)(11), which operates as a catch-all control for a variety of military transport/utility and civil aircraft controlled under the EAR that incorporate “mission systems.” The stated intent of ECR is to specifically enumerate on the USML only those items that warrant the highest level of control and to move remaining items to the CCL. The use of catch-all controls should be limited as much as possible. As explained in more detail below, this control is unnecessary because (1) military aircraft with mission capabilities that warrant ITAR control are described in the remaining subcategories of Category VIII(a); (2) controlling aircraft under paragraph (a)(11) is redundant, as the incorporated USML “mission systems” continue to be subject to the ITAR even after incorporation into EAR-controlled aircraft; and (3) the control triggers excessive Congressional notifications of aircraft sales.

The current language of Category VIII(a)(11) controls aircraft incorporating any ITAR-controlled mission system. “Mission systems” are defined as “‘systems’ that are defense articles that perform specific military functions such as by providing military communication, electronic warfare, target designation, surveillance, target detection, or sensor capabilities.” See Note 1 to paragraph (a)(11). The definition could be read to effectively capture all ITAR-controlled systems, as “military function” is an essential element of ITAR control.

This catch-all aircraft control is unnecessary, as military aircraft with mission capabilities warranting ITAR control are described in the remaining subcategories of Category VIII(a). For example, Category VIII(a)(7) captures aircraft equipped with sensors that allow it to perform military intelligence, surveillance, and reconnaissance functions, Category VIII(a)(8) captures aircraft equipped with electronic warfare systems, and Categories VIII(a)(2) and (a)(4) capture attack aircraft equipped with target designation and detection capabilities. The Department should apply controls at the aircraft level when the aircraft incorporates mission systems that provide specific mission capabilities of the type described in the other paragraphs of VIII(a).

By contrast, the international version of the Black Hawk, a military utility helicopter that in its base configuration does not incorporate mission systems of the type that provide capabilities described in other VIII(a) entries (e.g., ISR, electronic warfare, targeting, etc.) but does incorporate an engine controlled in Category XIX, would be captured under VIII(a)(11). Although engines are not listed in the exemplary list of mission systems, they are “systems” that arguably allow the helicopter to perform a military function. Under the broad “mission systems” definition in the Note, the incorporation of ITAR-controlled engines alone appears to place the utility aircraft under (a)(11). Category VIII(a)(11) also captures civil helicopters (ordinarily classified under ECCN 9A991) that are outfitted with certain USML systems, such as a directional finder or Electro-Optical/Infrared sensor system for the purpose of civil SAR activity.² Likewise, these ITAR-controlled systems do not provide the aircraft with mission

² In the civil SAR market, international customers have requirements for civil aircraft with capabilities such as gyro-stabilized Electro-Optical/Infrared sensor systems or other electronics. A direction finder would be classified under USML Category XI, while the infrared sensor system would be classified under USML Category XII. The global civil SAR market, particularly related to the safe transport of workers in the offshore oil and gas industry, represents a significant market opportunity. During the review of Category XII, the Department should assess the appropriate level of control over infrared sensor systems with critical life-saving application in the global civil SAR market.

capabilities described in other VIII(a) entries, yet result in triggering the aircraft-level control under VIII(a)(11).

ITAR-controlled “mission systems” that do not impart mission capabilities for aircraft otherwise enumerated in VIII(a) are not, by implication, providing critical military or intelligence capabilities and, therefore, their incorporation does not warrant controlling the entire utility or civil aircraft under an aircraft-level control. These systems, however, continue to be subject to the ITAR after incorporation into EAR-controlled aircraft under the longstanding “see through” rule. These systems would require ITAR authorization for export even when incorporated in an aircraft. The Department would have the opportunity to fully vet proposed consignees and end-users of these systems as part of its normal licensing process. This would include, where applicable, the requirement to obtain a DSP-83 for those systems designated as Significant Military Equipment (“SME”).³ As such, the (a)(11) catch-all control is redundant.

In addition, the current control structure and associated licensing policies may result in excessive Congressional notifications. The Department has stated in guidance published on its website that license applications for the export of a civil aircraft that incorporates an ITAR-controlled mission system must include the full value of the aircraft in the export license application.⁴ In the case of civil aircraft that incorporate ITAR-controlled “mission systems,” DDTC’s current approach regarding valuation would result in Article 36(c) Congressional notifications of aircraft sales that are comprised of overwhelmingly commercial, non-ITAR content. For example, in a recent license application to support a civil helicopter sale to a non-U.S. Coast Guard, the value of the individual aircraft exceeded \$20 million, but the ITAR components incorporated in the aircraft constituted less than 10 percent of that value.

If the Department determines that there is a continuing need to maintain Category VIII(a)(11), we urge the Department to implement one or more of the following changes: (1) revise the definition of “mission system” to affirmatively identify only those specific mission systems that warrant controlling the entire aircraft on the USML; (2) revise the FAQ guidance relating to VIII(a)(11) to allow exporters to value, for licensing purposes, only those defense articles that actually comprise the mission systems that result in VIII(a)(11) control and reflect the overwhelming non-USML content in these utility and civil platforms; and/or (3) expand the general Note to Category VIII – which allows for licensing by the Department of Commerce of a limited universe of parts and components enumerated in VIII(e) and (h) when incorporated in a military aircraft subject to the EAR and classified under ECCN 9A610 – to cover a much broader range of parts, components and systems in other USML categories when incorporated into either military (9A610) or civil (9A991) aircraft subject to the EAR and allow those to be licensed by the Commerce Department as 600 series aircraft.

B. Clarify “Armed” Aircraft and “Attack Helicopters”

UTC is concerned that there is ambiguity regarding the meaning of “armed” aircraft under USML Category VIII(a)(16) and “attack helicopters” under USML Category VIII(a)(4),

³ Although the entire aircraft would not be subject to DDTC licensing, use of a DSP-83 would provide for additional assurances that the end user is aware that they are receiving an aircraft incorporating ITAR-controlled items. The end user would still be subject to ITAR restrictions for those USML items, including reexport/retransfer restrictions.

⁴ See <http://www.pmdtc.state.gov/faqs/ecr.html#ms>.

and hereby requests that the Department provide guidance on the meaning of both terms. More specifically, UTC requests that the Department add a Note to Category VIII(a) stating that:

NOTE: Attack Helicopters described in VIII(a)(4) are those military helicopters with the USG designation of "A" (e.g., AH-64D, AH-1Z, etc.) that represent designs which are optimized to the "attack" mission and are not considered "multi-mission" helicopters. Weaponized dual- or multi-mission helicopters are captured through other controls including (a)(16) or individual controls on installed systems.

UTC also requests that the Department revise USML Category VIII(a)(16) to clarify the meaning of the term "armed." The existing language could be interpreted to include weapons installed on the aircraft which are "crew served" (i.e., not controlled from the cockpit) and are for defensive purposes. If the Department's intent was to control armed multi-mission aircraft incorporating cockpit-controlled weapons (guns, missiles, rockets, etc.) that are released by some form of fire control system, UTC recommends that the language of USML Category VIII(a)(16) be revised as follows:

(16) are armed or are specially designed to be used as an offensive platform to deliver munitions or otherwise destroy targets (e.g., firing lasers, launching rockets, firing missiles, dropping bombs, or strafing). This paragraph does not include aircraft with only crew-served weapons or weapons provisions.

If this language does not capture the Department's intent, UTC requests that the Department provide additional guidance on the meaning of "armed."

C. Limit ITAR Control of Optionally Piloted Vehicles to Military Aircraft

Optionally Piloted Vehicles ("OPVs") are captured in USML Category VIII(a)(13). Sikorsky has identified a commercial market demand for helicopter OPVs to fulfill certain civil roles. One role in particular, the transport of cargo to offshore oil platforms, could be operational within the next five years. UTC agrees that there is a critical need to rigorously regulate the export of helicopter OPVs that have specific and significant military capacity. However, helicopter OPVs without such capacity should be subject to a lower level of control. Otherwise, U.S. companies may unnecessarily face a negative competitive impact. This may further lead to foreign companies ultimately achieving a technological lead in the commercial application of OPV technology.

The Sikorsky S-76 and S-92 model aircraft are civil helicopters used extensively in the offshore oil support market. Beyond transporting personnel, a significant portion of the offshore oil support role involves moving cargo to offshore platforms. The ability to provide automated cargo delivery will translate to lower operating cost and a more competitive price point. Consequently, Sikorsky has been investing in developing OPV capability for the commercial market.

Under Sikorsky's Matrix™ Technology autonomy research program, Sikorsky has conducted flight tests of the Sikorsky Autonomy Research Aircraft ("SARA"), a Sikorsky S-76 commercial helicopter equipped with fly-by-wire controls and other special equipment and software. The aircraft first flew in July of 2013 and has since demonstrated applicability for

commercial cargo resupply operations. With some additional commercial investment, OPV-capable products could be introduced to the commercial marketplace within the next five years. This is subject to FAA action to integrate such aircraft into the national airspace.

There is evidence that other major non-U.S. helicopter manufacturers are pursuing OPV capability. If the Department continues to control all OPVs as defense articles, U.S. manufacturers will be hindered in commercial development, marketing and sales against non-U.S. manufacturers. Beyond the initial negative economic impact of reduced U.S. sales, this may ultimately lead to foreign manufacturers developing a technological edge in the commercial application of OPV capability. In a less restrictive regulatory environment, foreign companies would likely have greater incentive to invest in commercial applications, and they would also benefit from the experience in applying the technology commercially.

UTC recommends that the Department modify USML Category VIII(a)(13) to control only the export of OPVs that are configured or equipped specifically for military applications, such as weapons or targeting platforms or electronic warfare. Other OPVs would be subject to the EAR under ECCNs 9A012 and 9A120, which control non-military UAVs that have autonomous flight control and navigation capability or capability of controlled flight out of the direct visual range of a human operator.

D. Release Civil Airlift Aircraft Variants Captured by USML Category VIII(a)(14)

In October 2014, the State Department revised USML Category VIII to add subsection (a)(14) (previously part of the definition of “Aircraft” in ITAR §121.3) covering “aircraft with a roll-on/roll-off ramp, capable of airlifting payloads over 35,000 lbs. to ranges over 2,000 nautical miles without being refueled in-flight, and landing onto short or unimproved airfields.”⁵ On April 8, 2015, the Department of Commerce, Bureau of Industry and Security (“BIS”) published new guidance clarifying that the change applied to the Lockheed Martin C-130 military transport aircraft and its L-100/L-382 civil variants.⁶ This new guidance states:

- All models and versions of the Lockheed Martin C-130 and L-100/L-382 aircraft are within the scope of USML Category VIII(a)(14);
- Parts and components common to the C-130 and L-100/L-382 aircraft that are not enumerated on the USML or an ECCN 9A610.y subcategory are controlled under ECCN 9A610.x, unless released by subparagraph (b) of the EAR’s “specially designed” definition;

The L-100 is a demilitarized Lockheed C-130E military transport aircraft offered for sale to civilian operators in three variants of differing lengths. In developing the L-100, Lockheed removed non-commercial equipment from the aircraft and replaced the C-130’s Allison (now Rolls-Royce) T-56 engines with Allison/Rolls-Royce 501-D22/501-D22A engines. The L-100 received Federal Aviation Administration type certification in February 1965. Commercial operators such as Safair, Transafrik, Lynden Air Cargo, and Tepper Aviation use L-100s to haul freight and conduct humanitarian missions.

⁵ 79 Fed. Reg. 61226 (October 10, 2014).

⁶ <http://www.bis.doc.gov/index.php/policy-guidance/faqs?view=category&id=114#subcat136>

The shift in jurisdiction of the L-100 aircraft, and the resultant change in classification of structural components common to both the L-100 and C-130 (models A through H), has a significant impact on companies that provide aftermarket support for commercial operators of the L-100. UTC requests that the Department reconsider the scope of Category VIII(a)(14) consistent with stated ECR objectives to control only those military aircraft and related articles that provide critical military or intelligence capabilities.

II. USML Category VIII(h) – Aircraft Parts, Components, Accessories, Attachments, Associated Equipment and Systems

A. Delete USML Category VIII(h)(2) and Modify USML Category VIII(h)(18) to Capture Certain Gearboxes

The focus in developing helicopter transmission technology over the past decade has been in two general categories: increased power density and loss of lubrication. Technological improvements in each of these categories provide benefits for both commercial and military aircraft, as both markets demand increased payload and the ability to continue operating after loss of lubrication. These two categories are nevertheless both used as criteria for determining whether a gearbox is controlled under the ITAR. Specifically, paragraph (h)(2) controls:

(h)(2) [f]ace gear gearboxes, split-torque gearboxes, variable speed gearboxes, synchronization shafts, interconnecting drive shafts, or rotorcraft gearboxes with internal pitch line velocities exceeding 20,000 feet per minute and able to operate 30 minutes with loss of lubrication, and specially designed parts and components therefor.

As demonstrated in the attached **Exhibit 1**, both gearbox design architecture and the ability to operate after loss of lubrication provide critical commercial capabilities and, in the case of loss of lubrication, enhance the safety of a civil rotorcraft. Neither criterion should be used as a factor to determine whether a gearbox provides critical military capabilities warranting ITAR-control. Instead, a more appropriate criterion for distinguishing military capability is special design features in military rotorcraft gearboxes for ballistic tolerance. Such criteria already are used in Category VIII(h)(18) regarding drive systems and flight control systems. UTC proposes modifying VIII(h)(18) to capture “specially designed” ballistically tolerant parts and components as follows:

(h)(18) Drive systems and flight control systems specially designed to function after impact of a 7.62mm or larger projectile, and specially designed ballistically tolerant parts and components therefor.

All other gearboxes and gearbox technology that do not meet the recommended revised ITAR control shall fall under the jurisdiction of the EAR. Military gearboxes and their “specially designed” parts and components which do not meet the recommended ITAR control criteria would fall under ECCN 9A610.x, and related technologies would fall under ECCN 9E610.a. Civil gearboxes and their “specially designed” parts and components would fall under ECCN 9A991.d. “Required” development and production technologies for civil gearboxes would remain under ECCN 9E003.d.

B. Release Certain Tail Fold Systems and Folding Stabilators Captured by USML Category VIII(h)(3)

Category VIII(h)(3) currently captures automatic and manual tail folding systems that allow for rapid deployment, as well as manual systems that require significant maintenance action/downtime to perform the fold operations. It also captures folding stabilators, which are common to platforms with and without the rapid deployment capability. UTC proposes that the Department modify paragraph (h)(3) to include only quick-fold systems designed for maritime operations and the “specially designed” parts and components for those systems.

Several Sikorsky helicopters models currently have tail folding systems. For example, the CH-148 (H-92) Cyclone and the CH-53 have an automatic folding tail, while the SEAHAWK helicopter has a manual, quick-fold tail system. These maritime tail fold systems are designed to fold in order to reduce the overall footprint of the platform for rapid deployment, strategic transport, and storage for shipborne operations. The design must take into account not only the required aircraft load/vibration stresses, but also the overall aircraft impact of the fold/spread operation on a repetitive basis, the operational readiness of the aircraft caused by the fold/spread requirements, as well as wind speed and sea state conditions that will impact the airframe. By contrast, the BLACK HAWK helicopter incorporates a less capable manual tail fold system. The BLACK HAWK tail fold systems are not utilized under normal operating situations, and involve significant maintenance action/downtime to return the aircraft to the required flight configuration.⁷

Folding stabilators do not differ between platforms with automatic tail fold systems, manual quick-fold systems and other manual tail fold systems. The folding three-piece stabilator incorporated in the BLACK HAWK and SEAHAWK platforms both allow for reduction of the aircraft footprint for storage and transport purposes. In addition, wing folding kits for civil aircraft are designed to perform the same function as the BLACK HAWK/SEAHAWK folding stabilators. UTC does not believe that folding stabilators provide a significant military advantage that would warrant control under the ITAR.

UTC recommends that the Department amend Category VIII(h)(3) as follows:

(h)(3) Tail boom folding systems specially designed for maritime operations, or automatic rotor blade folding systems, and specially designed parts and components therefor.

C. Clarify Phrase “and computers” in Category VIII(h)(16)

Category VIII(h)(16) lists four distinct items: “fire control computers, stores management systems, armaments control processors, {and} aircraft-weapon interface units *and computers*.” (Emphasis added.) The structure of (h)(16) suggests the phrase “and computers” relates only to “aircraft-weapon interface units” and not other listed systems. Also, the text does not control specially designed parts and components of the listed items. As such, a computer within stores

⁷ Supporting data regarding maintenance is Sikorsky Aircraft Corporation Proprietary, and can be provided upon request.

management system would not be captured under VIII(h)(16). If the intent of control in subparagraph (h)(16) is different, we request the Department clarify the language.

D. Define “Thermal Engines” in Category VIII(h)(24)

Category VIII(h)(24) controls “thermal engines specially designed for aircraft controlled in this category or controlled in ECCN 9A610.” UTC requests additional clarification and definition of “thermal engines.” A “thermal engine” is a system that converts heat or thermal energy to mechanical work. This describes gas turbine engines listed in Category XIX, but also internal combustion reciprocating engines, heat recovery engines, etc. To avoid confusion, “thermal engines” should be defined.

E. Clarify Scope of Category VIII(h)(25)

Paragraph (h)(25) controls “thermal batteries specially designed for aircraft controlled in this category or controlled in ECCN 9A610.” UTC requests additional clarification of the phrase “specially designed for aircraft.” A UTC company manufactures several versions of the ACES ejection seat for various fighter aircraft, with the ejection seats containing 1 or 2 thermal batteries depending on the particular configuration. As a component of a non-VIII(h)(1) aircraft (for example, an F-16), this particular ejection seat configuration is classified as 9A610.x, and the thermal batteries contained therein are classified as VIII(h)(25). However, the thermal battery is specially designed for the 9A610.x ejection seat and does not perform or support any aircraft function, nor does the thermal battery support any of performance capabilities of the VIII(a) aircraft itself. We request the Department clarify whether the scope of (h)(25) include thermal batteries specially designed for aircraft and any aircraft systems.

If VIII(h)(25) is intended to capture all thermal batteries in the aircraft – including those specially designed for 9A610.x aircraft assemblies/components – we request clarification that those 9A610.x assemblies (ejection seat in this example, with an VIII(h)(25) battery incorporated therein) can be exported as 9A610.x assemblies and only the VIII(h)(25) thermal batteries exported separately as spare or replacement items would be subject to the ITAR and State Department licensing. The Department can implement such clarification by amending the general Note to Category VIII to specify that the designated VIII(e) and (h) items are eligible to be licensed by the Department of Commerce when incorporated in a military aircraft or aircraft system or component subject to the EAR and classified under ECCN 9A610.

III. USML Categories VIII and XIX – Add Clarifying Language that Test, Inspection and Production Equipment are Controlled under 9B610 and 9B619, Respectively

UTC requests that language be added to USML Categories VIII(h)(1) and XIX(f)(1) to clarify that the general term “equipment,” as it is used in those categories, does not include test, inspection, and production equipment otherwise described in, and controlled by, ECCNs 9B610 and 9B619.

A. Pre-ECR, USML Category VIII(h) Controlled Test, Inspection, and Production Equipment Related to Category VIII Controlled Items

Prior to the regulatory changes that took effect on October 15, 2013, Category VIII, paragraph (h), controlled “components, parts, accessories, attachments, *and associated equipment (including ground support equipment)* specifically designed or modified for the articles in paragraphs (a) through (d).” (Emphasis added.) Test, inspection, and production equipment not classified as Category VIII(h) (*i.e.*, test, inspection and production equipment related to non-ITAR controlled items), except in a few unique cases (*e.g.*, EAR ECCN 9B001), was classified as EAR99.

B. Post-ECR, EAR Controls Test, Inspection, and Production Equipment Related to Category VIII and Category XIX Controlled Items

The regulatory changes to Category VIII (along with the creation of Category XIX) and the corresponding creation of the EAR’s 600-series make clear that test, inspection and production equipment related to Category VIII and XIX items are now controlled under 9B610 and 9B619, respectively. Specifically, 9B610 and 9B619 control test, inspection, and production equipment and related commodities specially designed for the development or production of commodities enumerated or otherwise described in ECCN 9A610 or USML Category VIII, and ECCN 9A619 or USML Category XIX, respectively.

For the avoidance of doubt, the “Related Controls” section of both 9B610 and 9B619 contain explicit statements that ITAR Categories VIII and XIX do not control commodities enumerated or otherwise described in the related 9B6XX ECCNs. Specifically, the “Related Controls” section for 9B610 states:

USML Category VIII(h)(1) controls “parts,” “components,” “accessories,” “equipment,” and “attachments” “specially designed” for the aircraft enumerated or otherwise described in Category VIII(h)(1), but does not control the commodities enumerated or otherwise described in ECCN 9B610. USML Category VIII(h)(2)-(26) controls other aircraft “parts,” “components,” “accessories,” “attachments,” “equipment,” and “systems.” (Emphasis added.)

Similar language exists in the “Related Controls” section of 9B619:

USML Category XIX(f)(1) controls “parts,” “components,” “accessories,” “equipment,” and “attachments” “specially designed” for the engines described in Category XIX(f)(1), but does not control the commodities enumerated or otherwise described in ECCN 9B619. USML Category XIX(f)(2)-(7) controls other engine “parts,” “components,” “accessories,” “attachments,” “equipment,” and “systems.” (Emphasis added.)

Moreover, in the final rule published on April 16, 2013 (78 Fed. Reg. 22740), the Department of State noted in response to a commenter:

One commenting party recommended adding the words “tooling and test and support equipment” to both Note 2 [of section 120.41] and the lead-in sentence to paragraph (b) [of 120.41] to exclude simple tooling and equipment (e.g., wrenches, winches, dollies). The Department did not accept this recommendation. Tooling and test and support equipment are only controlled if specifically enumerated on the USML. The B group of the new 600 series (e.g., ECCN 9B610) on the CCL should be reviewed for potential controls on tooling and test and support equipment. (Emphasis added.)

Despite the clear language of the EAR indicating that test, inspection and production equipment related to Category VIII and XIX controlled items are themselves controlled under ECCNs 9B610 and 9B619, and the Department of State’s intent as demonstrated by its Federal Register comments, because of the lack of clarity in the ITAR regarding the term “equipment,” an individual reading the term broadly may incorrectly classify test, inspection and production equipment that should be controlled under 9B610 or 9B619 as Category VIII or XIX.

C. Following the Order of Review May Cause Misclassification of Test, Inspection and Production Equipment

Because of the lack of clarity in the ITAR regarding the general use of the word “equipment” in Categories VIII(h)(1) and XIX(f)(1), individuals following the “Order of Review” in section 121.1(b) may never get to the clarifying language contained in the “Related Control” section of either 9B610 or 9B619. If an individual classifying an item assumes that “equipment,” as used in VIII(h)(1) or XIX(f)(1), captures tooling, inspection and production equipment, they will stop at that point and never proceed to the EAR. Accordingly, to better align the EAR and ITAR, UTC requests that language be added to the USML to make clear that test, inspection and production equipment related to VIII and XIX items are controlled under 9B610 and 9B619, respectively.

D. Future Revision of the USML Should Not Aim to Control Test, Inspection and Production Equipment Related to Category VIII(h) and XIX(f) Items

UTC recommends, with very limited exception, that test, inspection and production equipment remain on the CCL in future updates to the regulations. As noted above, the goal of ECR is to enumerate on the USML only those items that warrant the highest level of control and to move remaining items to the CCL, limiting the use of catch-all controls. Test, inspection and production equipment for USML items are one step removed from the items themselves. The majority of these items are holding fixtures, gauges, installation tools, floor jacks, etc. These items are “specially designed” because they have a unique performance characteristic, but those characteristics may only be unique, not superior, to a similar AT-controlled item. The most sensitive test, inspection and production equipment – those which directly support stealth capability (e.g., low observable production or checking) – are already enumerated on the USML in Category XIII(k), so no additional control is required. Other items of particular sensitivity to the U.S. Government should be specifically enumerated, rather than captured by catch-all provisions.

IV. Categories VIII and XIX – Remove Export-Specific Classification of Classified Data

UTC recommends the deletion of paragraphs VIII(h)(20) and XIX(f)(6), which identify certain items as “classified.” In the alternative, if deletion of the entire paragraph is rejected, UTC recommends, at a minimum, deleting sub-paragraphs VIII(h)(20)(iii) and XIX(f)(6)(iii) or requests that these subparagraphs be clarified.

A. Paragraphs VIII(h)(20) and XIX(f)(6) Should Be Deleted in their Entirety

Prior to ECR, a “security” classified item enumerated in a USML category would be controlled under the specific category in which it was enumerated. In that way, from an export-control perspective, classified items were indistinguishable from similar non-classified items controlled under the same category. USML Category XVII controlled classified articles and technical data not otherwise enumerated. The pre-ECR approach supported operational security (“OpSec”) by providing a USML classification without specifically identifying an item as classified. A drawback to this approach, however, was that classified items might not be controlled as SME under the applicable USML category.

Post-ECR, with the addition of VIII(h)(20) and XIX(f)(6), classified items are now all controlled as SME, but there is an operational security trade-off, as these items are now clearly identified as “security” classified. Unclassified systems containing the export jurisdiction and classification of commodities and their associated technical data now provide a clear indication that those items are of a particular National Security interest and may constitute compilation data⁸.

To avoid the specific identification of items as classified under VIII(h)(20) or XIX(f)(6), UTC recommends deleting VIII(h)(20) and XIX(f)(6) in their entirety and updating Category XVII with the following:

***(a) All articles, and technical data (see § 120.10 of this subchapter) and defense services (see § 120.9 of this subchapter) relating thereto, that are classified in the interests of national security and that are not otherwise enumerated or described on the U.S. Munitions List, or that contain classified software directly related to defense articles in this subchapter or 600 series items subject to the EAR.**

The addition of the “or described” underlined language above ensures that USML catch-all entries (e.g., XIX(f)(1)) take precedence over Category XVII. The software reference captures the items of concern in the deleted sub-paragraph (iii).

B. VIII(h)(2)(iii) and XIX(f)(6)(iii) Should be Deleted or Clarified

In the alternative, if VIII(h)(20) and XIX(f)(6) are not deleted in their entirety, subparagraphs VIII(h)(20)(iii) and XIX(f)(6)(iii) should be deleted or clarified. These

⁸ In some instances, certain information that would otherwise be unclassified when standing alone may require (security) classification when combined or associated (i.e., ‘compiled’) with other unclassified information.

subparagraphs control “[a]ny part, component, accessory, attachment, equipment, or system that is being developed using classified information . . .” The subparagraph is superfluous because a classified commodity will be caught by subparagraphs VIII(h)(20)(i) or XIX(f)(6)(i), whether it is in production or development. If the final version of a commodity is not classified, then subparagraph (iii) over-controls as SME commodities that may be unclassified, non-SME XIX(f) or 9A619 once they reach serial production.

At a minimum, UTC requests clarification of the phrase “using classified information” in the language quoted in subparagraphs VIII(h)(20)(iii) and XIX(f)(6)(iii). Most modern weapon systems have classified capabilities or performance characteristics. These classified performance requirements impact the design of sub-systems and associated components. For example, the altitude ceiling of a fighter jet may be classified information; however, this ceiling requirement will flow into the requirements for the engine performance at altitude, and will impact the performance requirements for parts and components such as the fuel pump, pressure seals, etc. A broad definition of the phrase “using classified information” in XIX(f)(6)(iii) would capture all of the previously mentioned sub-systems and components.

To avoid driving all design activities into security classified processes, it is common practice for classified requirements (*e.g.*, specific maximum altitude and airspeed) to be converted into more general unclassified requirements, such as an operating range, or to create a part specific value (*e.g.*, fuel pump flow) that while driven by and traceable to a classified requirement, does not directly provide the classified value. Accordingly, UTC understands the intent of the entry to capture those items that are being developed directly from classified data, not indirectly through unclassified information derived from classified information. UTC requests deletion subparagraphs VIII(h)(20)(iii) and XIX(f)(6)(iii) or, in the alternative, that the phrase “using classified information” be clarified in an updated rule.

V. Category XIX – Add General Note Stating Category XIX Parts and Components When Incorporated into 9A619 Engines are Controlled by the EAR

A general Note to Category VIII clarifies that certain parts, components, accessories, and attachments otherwise controlled by Category VIII are licensed by the Department of Commerce when incorporated into a 9A610 military aircraft. The note makes clear that USML-listed items remain subject to ITAR controls if exported separately (*e.g.*, as spares or replacement parts). UTC recommends that a similar note be added to Category XIX for items incorporated into items described in 9A619. Without a note similar to one in Category VIII, Category XIX effectively retains a comprehensive “see-through” rule that results in complex and confusing classification and authorization processes.

For example, during the development of a single 9A619-controlled developmental gas turbine engine, for schedule or cost reasons a manufacturer may prefer to use an existing XIX(f)(4) combustor shell instead of designing a new assembly. Under the present regulations, if the manufacturer wanted to export the same developmental engine incorporating the XIX(f)(4) combustor shell, two separate export authorities would be required, one for the combustor shell itself, which would be exported as XIX(f)(4), and another for the remainder of the engine under 9A619.a or XIX(x).

Such a transaction requires careful explanation to the licensing agencies and further complicates the classification of technical data associated with the otherwise EAR-controlled items. It is important to note that this only impacts pre-production equipment, such as development engines and test rigs. If the 600 series items are in production, the formerly Category XIX parts would not be specially designed per the paragraph (b)(3) release of ITAR § 120.41.

UTC recommends a general Note for Category XIX similar to that in Category VIII. The following wording is suggested:

Note: Systems, parts, components, accessories, and attachments in paragraphs (e) and (f)(1) through (f)(5) are licensed by the Department of Commerce when incorporated in a military engine or related engine commodity subject to the EAR and classified under ECCN 9A619. Replacement systems, parts, components, accessories and attachments are subject to the controls of the ITAR.

VI. Clarification on the Consultation or Use of ITAR Technical Data on EAR items

Due to the nature of ECR, there are systems on the USML that contain specially designed parts, components, and subassemblies that are subject to the EAR. Examples include 9A619.a engines for a Category VIII(a) aircraft or a 9A619.x fan blade for a XIX(a) engine. In both examples, the 9A619 items are designed using VIII(i) or XIX(g) mission data and may also interface directly with equipment that remains on the USML. In the case where an EAR-controlled item interfaces with a USML item, there will be data (dimensions, requirements, characteristics, etc.) common to both items.

Because the EAR-controlled item was designed and has parameters common with ITAR-controlled data, there is potential confusion regarding the jurisdiction of the EAR-controlled items. UTC suggests both the EAR and ITAR contain additional clarifying language similar to the language proposed below:

An item not listed on the USML is subject to the EAR, even if the item was designed with USML data.

Technical data directly related to an EAR-controlled item is subject to the EAR, even if that technical data is coincident with technical data for a USML item associated with (*i.e.*, interfaces to, incorporates, or is a component of) an EAR-controlled item.

Note: Technical data common to an EAR-controlled item and a USML item (*e.g.*, interface data) is subject to the EAR when associated with the EAR-controlled item, and is subject to the USML when associated with the USML item.

The proposed clarifying language should be added to the USML in order to clearly state what is not subject to the ITAR, and should be added to the CCL to provide clarification.

DOS-2014-0030

May 1, 2015

Page 14

* * *

For additional information, please contact the undersigned at (202) 336-7467 or peter.jordan@utc.com.

Sincerely,



Peter S. Jordan
Director, Senior International Trade Counsel
United Technologies Corporation

Exhibit 1

EXHIBIT 1

The focus in developing helicopter transmission technology the past decade has been in two general categories: increased power density and loss of lubrication. Technological improvements in each of these categories provide benefits for both commercial and military aircraft as both markets demand increased payload and the ability to continue operating after loss of lubrication.

I. Increased Power Density / Pitch Line Velocity

Internal pitch line velocities exceeding 20,000 feet per minute (fpm) is an obsolete requirement that is derived from the past when piston engines were replaced with the turbine power plants. The high (exceeding 20,000 feet per minute) PLV transmission was considered to be state of the art. However, this is no longer the case since all modern aircraft are powered by turbine engines as opposed to piston engines and more modern designs may have smaller pinion diameters that reduce the PLV. Secondly, the new materials and technologies are targeted to reduce the size and weight of the components so the state of the art gearbox today may have smaller diameter gears and therefore lower than 20,000 fpm PLV that conflicts with the original claim. There is nothing in this category that is specifically military in nature that would warrant control by the ITAR. Specific PLVs are proprietary and are not typically publicly released by the company that develops it. As explained in more detail below, this technology would also remain subject to National Security controls (NS1) under the EAR.

Changes to the transmission to achieve higher power density range from subtle process and material changes to existing gear designs to allow transmission of higher torque, to alternative gearbox configurations utilizing face gearing and multiple torque paths. The objective of the higher power density designs is to transmit more power for the same or less weight, thus increasing overall vehicle efficiency. Such transmission designs typically start with turbine engine input speeds in the 14,000 – 25,000 rpm range depending on air vehicle class which can result in pitch line velocities of the first stage gear mesh in the range of 20,000 fpm.

These gearbox configurations can ultimately result in lighter designs with increased reliability and maintainability characteristics which are beneficial to both commercial and military users. Ultimately, all of these technologies are applicable to both commercial and military platforms, and are found throughout industry as shown in Appendix A.

II. Loss of Lubrication

Both military and commercial helicopters need to have the capability to continue operating after a loss of lubrication event (often erroneously referred to as “run dry”). To state the obvious, military aircraft need to be able to escape from enemy territory and return to base or a safe zone after a lubrication system failure, while commercial aircraft need to be able to fly to the nearest safe landing area, particularly when over water and when used in environments such as off-shore oil transport. For that reason, FAA regulations require at least a 30-minute capability for Category A passenger aircraft per 14 CFR 29.927(c) after a lubrication system

failure (although the FAA does not require a system to “run dry”). While the motivation to provide this capability varies, the resultant technology is the same.

Loss of lubrication technology covers many areas and is pursued by to some degree by all helicopter manufacturers. Several approaches have been developed by helicopter OEM’s to provide additional run time after loss of lubrication: auxiliary lubrication recirculating systems, residual oil management systems, leak isolation valves, and single-pass emergency lubrication systems. Additionally, materials, finishing, and coatings have been developed specifically to perform better in low or residual lubrication situations and these have been incorporated into both gear and bearing designs. All of these technologies collectively serve to provide a capability to operate after a loss of lubrication event which includes both operation with an emergency lubrication system and operation after complete loss of all oil. These technologies are not by any means specifically military in nature. We understand that some in European industry employ an auxiliary lubrication system (glycol spray) to comply with this requirement and can exceed it with increased capacity reservoir. Industry expects future advances in civil aviation safety for gearboxes to continue to move towards increased loss of lubrication requirements.

III. Ballistic Tolerance

One feature that is military in nature is the ability of the transmission to be tolerant to a ballistic hit. To ballistically harden a transmission, the configuration, material choices, design criteria, structural analysis and limits may all be affected.

IV. Conclusion

As described above, both gearbox design architecture and the ability to operate after loss of lubrication provide critical commercial capabilities and in the case of loss of lubrication, enhance the safety of a rotorcraft. As such, neither criterion should be used as a factor to determine whether a gearbox is ITAR controlled. Current controls do not address the special design features in rotorcraft gearboxes for ballistic tolerance. A revised control which transitions from the current VIII(h)(2) to a more robust ballistics control is suggested in a modified USML VIII(h)(18) as follows:

“Drive systems and flight control systems specially designed to function after impact of a 7.62mm or larger projectile and “specially designed” ballistically tolerant parts and components therefor.”

All other gearboxes and gearbox technology that do not meet the recommended revised ITAR control shall fall under the jurisdiction of the EAR. Military gearboxes and their “specially designed” parts and components that do not meet the recommended ITAR control criteria would fall under ECCN 9A610.x and related technologies would fall under ECCN 9E610.a. Civil gearboxes and their “specially designed” parts and components would fall under ECCN 9A991.d. “Required” development and production technologies for civil gearboxes would remain under ECCN 9E003.d.

Appendix A:

Technology	Public Domain	Foreign Manufacturers	Patents	Comments
Face Gear Gearboxes	NASA/TM-2007-214970 "RDS-21 Face Gear Surface Durability Tests" NASA/TM-2011-217125 "Helical Face Gear Development Under the Enhanced Rotorcraft Drive System Program" NASA/CR-2005-213443 "Face Gear Drive with Helical ..."	Crown Gear B.V. (Holland)	US5247856 (1193) US5411431 US5494475 US5720584 US6041670 (2000) US5931612	Modern era leader in face gear development
		Eurocopter	US6276633 (2001) US6676073 (2004)	
		FiatAvio S.P.A. (Italy)	US5562372 US6260430 (2001)	
		Northstar (Canada)		
		Gleason (Germany)		Gleason is a US company, however all face gear grinding development work on the RDS-21 program was performed at their Germany development facility
Split-Torque Gearboxes	NASA TM 106410 (1994) "Dynamics of a Split Torque Helicopter Transmission" NASA TM 105884 (1992) "Split Torque Transmission Load Sharing" NASA presentation at AHS Forum in Montreal (2002) "Torque Splitting by a Concentric Face Gear Transmission"			
Variable Speed Gearboxes	NASA/TM-2008-215276 "Concepts for Variable/Multi-Speed Rotorcraft Drive System" NASA/TM-2009-215456 "Variable/Multispeed Rotorcraft Drive System Concepts"	Westland (England)	US4783023 (1988)	Helicopter rotor speed changing transmission
Interconnecting Drive Shafts		Eurocopter	US6276633 (2001)	
Internal Pitch Line Velocity	NASA Reference Publication 1152/AVSCOM Technical Report 84-C-15 (1(*)%) "Gearing" NASA paper "Initial Experiments of High-Speed Drive System Windage Losses"			
30 Minute Oil Out Capability		AugustaWestland (Italy/England)		Allonline news article "... 5 main factors determining capability of a MGB to operate for a prolonged period of time after loss of oil ..." (2013)