July 8, 2013

Sent via email to: publiccomments@bis.doc.gov

Regulatory Policy Division
Bureau of Industry and Security
U.S. Department of Commerce
Room 2099B
14th Street and Pennsylvania Avenue NW
Washington, DC 20230

Subject: RIN 0694-AF87

Export Administration Regulations (EAR): Control of Spacecraft Systems and Related Items the President Determines No Longer Warrant Control Under the United States Munitions List (USML)

Dear Sir or Madam:

TechAmerica is the leading association for the U.S. technology industry – the driving force behind productivity growth and job creation in the United States and the foundation of the global innovation economy. Representing premiere technology companies of all sizes, we are the industry's only trade association dedicated to advocating for the ICT sector before decision makers at the state, federal and international levels of government.

Thank you for the opportunity to provide comments on this proposed rule which describes how certain articles the President determines no longer warrant control under the United States Munitions List (USML) Category XV--spacecraft and related items--would be controlled on the Export Administration Regulations (EAR) Commerce Control List (CCL). Such items would be controlled by new Export Control Classification Numbers (ECCNs) 9A515, 9B515, 9D515, and 9E515 proposed by this rule and existing ECCNs. This is one in a planned series of proposed rules describing how various types of articles the President determines, as part of the Administration's Export Control Reform Initiative, no longer warrant USML control, would be controlled on the CCL and by the EAR.

TechAmerica members involved in the space market are largely 2nd and 3rd tier suppliers who manufacture or supply components such as integrated circuits, computers, diodes, and rectifiers for use in spacecraft. These members are on the frontline in competing against foreign firms who offer similar or technically identical products.

TechAmerica applauds the Administration's export control reform efforts and welcomes the transfer of certain spacecraft and related items from the USML to CCL. A robust U.S. space industrial base is necessary to ensure that the most advanced technologies are available to our nation's warfighters. Unfortunately, the control of spacecraft and related items under the ITAR has led to the deterioration of the U.S. space industrial base where the U.S. once maintained a significant advantage in terms of both market share and advanced technologies.

The harm U.S. export controls have done to the U.S. space industrial base has been well documented through many reports and studies. For example, according to a report released in early 2013 by the Aerospace Industries Association, an estimated $21 billion has been lost in sales to European rivals and other foreign satellite makers since the late 1990s with U.S. export controls being blamed as a primary culprit. It is well recognized that European satellite manufacturers, which make up a significant portion of the space market, prefer to buy items that are not subject to stringent U.S. export rules out of fear that the U.S. government may step in and halt a project or delay an upcoming launch. This fear, whether real or imagined, has influenced purchasing decisions since 1999.

The Department of Defense's Section 1248 Report of the National Defense Authorization Act for Fiscal Year 2010 recognizes this issue as a catalyst for space export control reform:

> "In summary, the Departments agree that maintaining non-critical satellites and related components on the USML and monitoring low-risk launch activities provide limited national security benefits. Moreover, this practice places the U.S. space industrial base at a distinct competitive disadvantage when bidding against companies from other advanced satellite exporting countries that have less stringent export control policies and practices. Transferring select items from the USML to the CCL would allow for controls consistent with other technologies and would help enhance the competitiveness of the U.S. space industrial base, while continuing to protect U.S. national security needs."

In order to address a deteriorating U.S. space industrial base and, in turn, prevent further harm to U.S. national security, it is imperative that space export control reform – i.e. the transfer of certain spacecraft and related items from the USML to CCL – be performed correctly from the outset. Otherwise, the resulting damage will have a long term consequence to U.S. national security and will provide further disincentive for U.S. companies, especially 2nd and 3rd tier

suppliers, to enter a small and highly competitive global market. Our comments provide recommendations to improve the proposed rule with the end goal of addressing U.S. national security requirements while also establishing appropriate controls on CCL spacecraft and related items. Our comments are as follows:

1. Due to the progression of commercial technology, the transfer of controls on radiation hardened circuits (ICs) from USML Category XV(d) to the new ECCN 9A515.d. should be effective immediately upon publication of the Final Rule.

We strongly support the transfer of controls on radiation hardened ICs from USML Category XV(d) to the CCL under the proposed ECCN 9A515.d. because it is necessary to avoid a collision between the progression of commercial technology and USML criteria. However, we note that the 180 day implementation period while appropriate for most changes to the USML and CCL is not appropriate for the change to Category XV(d) specifically. The 180 day implementation period is designed to allow ample time for companies to conform their systems to the new regulatory structure. For example, companies which were applying for ITAR licenses need to prepare their internal systems to file for Commerce licenses. Imposing the 180 day implementation period for transfer of controls from Category XV(d) to 9A515.d will not aid the only industry affected by it but will in fact harm it. That is because absent a timely change to Category XV(d), commercial devices which are not specially designed for space would soon be captured by the controls in that classification simply due to advancements in commercial technologies. These commercial devices have not been and do not belong under Category XV(d) but they could still be captured if the effective date for this change is delayed into 2014. We therefore request that the transfer of "radiation hardened IC" controls from Category XV(d) to ECCN 9A515.d be made effective upon publication of the final rule.

2. ECCN 9A515.x. for "parts," "components," "accessories" and "attachments" should be focused on "specially designed" items rather than using a catch-all approach for "space qualified" items.

TechAmerica prefers that ECCN 9A515.x. describe a list of controlled items that are defined by objective technical parameters. However, we recognize that it may be impossible to identify every "part," "component," "accessory," and "attachment" that should be controlled under this section.

It is this reason that U.S. government and industry expended considerable time over the past several years to develop the "specially designed" term which can be used to identify those items that, although not enumerated in a control entry, should be controlled for U.S. national security or other reasons. Accordingly, TechAmerica recommends that ECCN 9A515.x. be revised to replace the term "space qualified" with the term "specially designed" to be consistent with controls on parts, components, accessories and attachments found in the EAR and ITAR.

TechAmerica agrees with the view that only the tested part becomes space qualified and the rest of the production run is not, but we note the following issues with using a catch-all for "space qualified" items:

- We understand that the proposed rule "describes how certain articles the President determines warrant control under the United States Munitions List (USML) Category XV – spacecraft and related items—would be controlled on the Commerce Control List (CCL)." However, the proposed rule goes well beyond describing items transferred from the USML to CCL and instead seeks to control items previously not captured under USML Category XV by extending catch-all controls to "space qualified" items.

- A control for "space qualified" items – and particularly controls for items qualified through successful testing—represents a substantial roll-back in controls. For example, some spacecraft components such as diodes, rectifiers and certain semiconductors have not been specifically designed or modified for spacecraft and are not currently controlled under USML Category XV(e). However, some manufacturers qualify these items for spacecraft through testing per industry standards. Under the proposed rule, these items would become controlled under ECCN 9A515.x.

  This rollback presents several issues. First, we believe that simply testing a commercial part to a space qualification standard is technically innocuous as it does not impart any technical feature or capability that makes it more robust or suitable for space. It would seem inequitable to establish a control for such an item.

  Second, space qualification testing methods are publicly available and can be performed by foreign entities. This means that foreign entities could easily circumvent ECCN 9A515.x. controls by ordering a U.S. origin commercial product (which is not otherwise specially designed for spacecraft) and performing the testing themselves. This will no doubt result in more business for foreign test houses while further harming the U.S. space industrial base.

  Further, a rollback would trigger a major disruption to supply chains as parts that are already in the stream of commerce – and possibly integrated into foreign spacecraft --- could become subject to U.S. export control requirements. For example, some parts previously classified as EAR99 and exported to European satellite manufacturers would become controlled under ECCN 9A515.x. In some cases the resulting controls could delay or prohibit the European manufacturer from launch and/or prohibit transferring control of the satellite to the end-user simply because a part was tested to meet a space qualification standard.

- From a technical perspective, we do not agree that testing as used in the "space qualification" definition should be an independent criteria for determining whether an item is space qualified and therefore subject to a control under ECCN 9A515.x. Today

there are testing companies and governmental entities which routinely test widely available commercial electronics, including both active and passive device types which are not specially designed for space applications. This testing is done without the manufacturers consent or even knowledge. Placing commercial items at risk of greater control through a process outside the control of the electronics or semiconductor manufacturer is not consistent with the approach taken in the CCL with regard to other items subject to controls. To address this issue, the catch-all control should be focused on "specially designed" and remove testing as a control criterion

- Further, "testing" is an extremely broad term and ambiguous term. We propose that, if BIS determines that, despite the issues with space qualification criterion described in this letter, space qualification (and therefore testing) is used as a catch-all control, for the electronics industry, the definition of "space qualified" should minimally be revised to include the following Note:

  Note: A "microprocessor microcircuit," "monolithic integrated circuit," "multichip integrated circuit," "microcomputer microcircuit," other microcircuit, hybrid, oscillator, diode, transistor, relay, switch; and a passive device such as a capacitor, resistor, connector, wire, cable, transformer, inductors fuse, attenuator or coil, is only considered "qualified through successful testing" if it is:

  1. RHA certified equal to or greater than 500 Krad, AND
  2. Rated as QML Class V, QML Class K, JANS or Class S; , AND
  3. DPA testing, i.e., performance of Destructive Physical Analysis (DPA), consistent with program technical requirements and MIL-STD-1580 or equivalent testing standard is performed.

  For purposes of destructive sample testing, BIS should ensure that any extrapolation of results from DPA testing would apply only to equivalent QML Class V, QML Class K, JANS or Class S -certified and RHA-rated items that are in the physical possession of the party conducting such testing. Further, the control should extend only to the sample size specified for DPA, which typically involves no more than 30 units from a particular lot. This limitation would ensure that commercial parts, which are not the subject of a DPA test, do not become controlled.

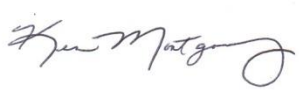
- We also note that in creating a catch-all for "space qualified" items, the U.S. is going well beyond any Wassenaar member country by implementing unique controls for "space qualified" items. To date, Wassenaar member countries have implemented controls for "space qualified" items with surrounding technical parameters such as those described in the CCL.

It is critical that ongoing export control reform efforts result in export regulations that not only protect U.S. national security interests, but foster the continued growth of the U.S. high tech sector. U.S. export regulations should not be applied in a manner that provides incentives for the

design-out of U.S. parts and components by customers located around the world which would directly benefit our competitors abroad.

Thank you once again for the opportunity to provide comments on this proposed rule.

Sincerely,



Ken Montgomery
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