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Revisions to the 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); Final Rule

**DEPARTMENT OF COMMERCE****Bureau of Industry and Security**

**15 CFR Parts 732, 734, 736, 740, 742, 744, 748, 758, 772, 774**

[Docket No. 130110030–3740–02]

RIN 0694–AF87

**Revisions to the 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)**

**AGENCY:** Bureau of Industry and Security, Department of Commerce.

**ACTION:** Interim final rule with request for comments.

**SUMMARY:** This interim final rule adds controls to the Export Administration Regulations (EAR) for spacecraft and related items that the President has determined no longer warrant control under United States Munitions List (USML) Category XV—spacecraft and related items. New Export Control Classification Numbers (ECCNs) 9A515, 9B515, 9D515, and 9E515 created by this rule and existing ECCNs on the Commerce Control List (CCL) will control such items. This rule also revises various sections of the EAR to provide the proper level of control for the new ECCNs.

This rule is being published in conjunction with the publication of a Department of State, Directorate of Defense Trade Controls rule revising USML Category XV to control those articles the President has determined warrant control on the USML. Both rules are part of the President's Export Control Reform Initiative. The revisions in this final rule are also part of Commerce's retrospective regulatory review plan under Executive Order (EO) 13563 (see the **SUPPLEMENTARY INFORMATION** for availability of the plan). This rule is being published as an interim final rule because the Departments of Commerce and State acknowledge that additional internal analysis of and industry input regarding the control threshold for various aspects of the amendments is warranted, particularly with respect to civil and commercial remote sensing satellites and civil and commercial space flight-related items. The Departments did not want to wait until this review is done to publish this rule in final form because of the substantial national and economic security benefits that will flow from the various amendments to the controls on satellites and related items.

**DATES:** *Effective Date:* This rule is effective June 27, 2014 except for amendatory instruction 8, which is effective July 1, 2014, and amendatory instructions 28–47, 49–50, 52, and 54, which are effective November 10, 2014.

*Comment Date:* Comments must be received by November 10, 2014.

**ADDRESSES:** You may submit comments by any of the following methods:

- Federal eRulemaking Portal: <http://www.regulations.gov>. The identification number for this rulemaking is BIS–2013–0012.

- By email directly to [publiccomments@bis.doc.gov](mailto:publiccomments@bis.doc.gov). Include RIN 0694–AF87 in the subject line.

- By mail or delivery to Regulatory Policy Division, Bureau of Industry and Security, U.S. Department of Commerce, Room 2099B, 14th Street and Pennsylvania Avenue NW., Washington, DC 20230. Refer to RIN 0694–AF87.

**FOR FURTHER INFORMATION CONTACT:** For questions about the ECCNs included in this rule, contact Dennis Krepp, Office of National Security and Technology Transfer Controls, Bureau of Industry and Security, U.S. Department of Commerce, Telephone: 202–482–1309, email: [Dennis.Krepp@bis.doc.gov](mailto:Dennis.Krepp@bis.doc.gov). For general questions about the regulatory changes pertaining to satellites, spacecraft, and related items, contact Robert Monjay, Regulatory Policy Division, Office of Exporter Services, Bureau of Industry and Security, at 202–482–2440 or [Robert.Monjay@bis.doc.gov](mailto:Robert.Monjay@bis.doc.gov).

**SUPPLEMENTARY INFORMATION:**

**Background**

The Bureau of Industry and Security (BIS) is publishing this interim final rule with request for comments as part of the Administration's Export Control Reform (ECR) Initiative. President Obama directed the Administration in August 2009 to conduct a broad-based review of the U.S. export control system to identify additional ways to enhance national security. In April 2010, then-Secretary of Defense Robert M. Gates, describing the initial results of that effort, explained that fundamental reform of the U.S. export control system is necessary to enhance our national security. The implementation of ECR includes amending the International Traffic in Arms Regulations (ITAR) and its U.S. Munitions List (USML) so that they control only those items that provide the United States with a critical military or intelligence advantage or otherwise warrant such controls, and amending the Export Administration Regulations (EAR) to control the

formerly ITAR-controlled items that do not warrant the controls of the ITAR.

On January 2, 2013, President Obama signed the National Defense Authorization Act for Fiscal Year 2013 (“2013 NDAA”) (Pub. L. 112–239). Section 1261 of the 2013 NDAA amended Section 1513 of the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (“1999 NDAA”) by striking the requirement that all satellites and related items be subject to the export control jurisdiction of the ITAR. The 2013 NDAA authorized the President, pursuant to section 38(f) of the Arms Export Control Act (AECA) (22 U.S.C. 2778(f)), to review Category XV of the USML “to determine what items, if any, no longer warrant export controls under” the AECA. On May 24, 2013, the Department of State, Directorate of Defense Trade Controls (DDTC) published a proposed rule, *Amendment to the International Traffic in Arms Regulations: Revision of U.S. Munitions List Category XV and Definition of “Defense Service”* (78 FR 31444) (herein “the companion proposed DDTC rule”) setting forth the proposed revised USML Category XV. On the same day, BIS published a companion proposed rule, *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)* (78 FR 31431) (herein “the May 24 (spacecraft) rule”), describing the revisions to the EAR required to exercise control over those spacecraft and related items no longer listed in USML Category XV and setting forth the proposed 9x515 ECCNs.

This interim final rule implements the proposal of the May 24 (spacecraft) rule to create four new 9x515 ECCNs in CCL Category 9 (ECCNs 9A515, 9B515, 9D515, and 9E515) to describe the EAR controls over items the President determines no longer warrant control under USML Category XV and that are not otherwise within the scope of an existing ECCN. New ECCN 9A515 applies to spacecraft, ground stations, and “specially designed” parts, components, accessories and attachments. New ECCN 9B515 applies to related test, inspection and production equipment and the “specially designed” parts and components. New ECCN 9D515 applies to related software. New ECCN 9E515 applies to related technology.

This rule also makes a number of conforming changes to the EAR and existing ECCNs to implement the creation of the 9x515 ECCNs and the appropriate controls on the export of

those items. In several existing ECCNs, BIS added or revised the related controls to provide cross references to relevant paragraphs in the revised Category XV or the new 9x515 ECCNs. The sections below set out the issues identified in the public comments to the May 24 (spacecraft) rule and describe BIS responses to those comments and changes from the proposed text.

This rule will be implemented in two stages. On the first effective date, 45 days following the publication of this interim final rule, the controls on radiation-hardened microelectronic circuits in Category XV(d) will be deleted from the USML, and microelectronic circuits will be removed from USML Category XV(e). In addition, the ITAR controls on software and technical data directly related to such microelectronic circuits will be removed from USML XV(f). The EAR will simultaneously create ECCNs 9A515.d and .e to control radiation-hardened microelectronic circuits, and 9D515.d and .e and 9E515.d and .e, to control software and technology specially designed for or required for such radiation-hardened microelectronic circuits. All changes in the EAR outside the CCL needed to give effect to these new controls will also become effective 45 days following the publication of this interim final rule. The reason for the 45-day period is explained in response to public comment #38 below.

On the second effective date, 180 days following the publication of this final rule, the remainder of USML Category XV will be revised. The remaining changes in this rule will then become effective, including the revisions to several non-9x515 ECCNs, the rest of ECCN 9A515 to provide the controls in paragraphs .a, .b, .x and .y, adding ECCN 9B515, and the rest of ECCNs 9D515 and 9E515 to control software and technology specially designed for or required for the remaining items that become subject to the controls of the 9x515 ECCN simultaneously with the amendments to the rest of USML XV.

This interim final rule requests public comment on the changes to the EAR implemented in this rule and the continued applicability of USML Category XV of the ITAR to commercial and civil spacecraft. In particular, BIS seeks comments on the continued application of USML controls to civil and commercial communications satellites, civil and commercial remote sensing satellites, commercial space launch vehicles, human spaceflight and academic or scientific satellites and other spacecraft. BIS would like to study if controls can and should be revised to allow continued control of spacecraft

with uniquely military or intelligence related capabilities on the USML, while allowing most, if not all, civil, commercial and scientific spacecraft to be shifted to the CCL. In addition, BIS seeks comments on any other aspect of this interim final rule and, in particular, whether the new controls described in this interim final rule are clear and, if not, how they could be revised to help ensure understanding of and compliance with the controls. DDTC will accept comments on paragraphs (a)(7) and (e)(11) of USML Category XV and ITAR § 124.15, as described in its interim final rule amending USML Category XV. Any revisions made by DDTC to the ITAR as a result of those comments may necessitate further revisions to the EAR, including to the new license documentation requirements for the export of satellites for launch, described in the new paragraph (y) of Supplement No. 2 to Part 748.

As required by Executive Order (EO) 13563, BIS intends to review this rule's impact on the licensing burden on exporters. Commerce's full plan is available at: <http://open.commerce.gov/news/2011/08/23/commerce-plan-analysis-existing-rules>. Data are routinely collected, including through the comments to be submitted, and new information and results from AES data on an ongoing basis. These results and data have been, and will continue to form, the basis for ongoing reviews of the rule and assessments of various aspects of the rule. As part of its plan for retrospective analysis under EO 13563, BIS intends to conduct periodic reviews of this rule and to modify, or repeal, aspects of this rule, as appropriate, and after public notice and comment. With regard to a number of aspects of this rule, assessments and refinements will be made on an ongoing basis. This is particularly the case with regard to possible modifications that will be considered based on public comments described above.

#### Response to Comments

BIS received thirty-eight public comments on the May 24 (spacecraft) rule before the close of the public comment period on July 8, 2013. The following is a summary of those comments, along with BIS's responses and descriptions of all changes from the May 24 (spacecraft) rule. The comments are organized by topic, with similar comments grouped together under the same heading. BIS is referring to the new ECCNs 9A515, 9B515, 9D515 and 9E515 collectively as 9x515. In the May 24 (spacecraft) rule, BIS referred to these proposed ECCNs as the "500 series,"

and many comments refer to the "500 series."

#### General Comments

*Comment #1:* Twenty commenters expressed overall support for the May 24 (spacecraft) rule.

*Response to Comment #1:* BIS is pleased with the overwhelmingly positive response to the concept of moving commercial, scientific, weather and other less sensitive spacecraft and parts and components, and related software and technology, from the USML to the CCL in order to accomplish the national and economic security objectives of this part of the Export Control Reform effort.

*Comment #2:* One commenter requested that BIS review the effective date of the entire rule to determine if a six month delayed effective date is necessary to ensure proper implementation of the new regime by the U.S. licensing agencies and the effected industry.

*Response to Comment #2:* BIS has determined that, in general, a six-month period is required to allow exporters, reexporters and other parties sufficient time to study the new rules, to reclassify their products, and to update their compliance systems for transitioning "spacecraft" and related items. However, as discussed in detail below in the response to comments regarding radiation-hardened microelectronic circuits, controls on such items will transition from the USML to CCL on June 27, 2014. Therefore, this interim final rule contains two effective dates to accommodate the interests of the two different industries in a manner that does not compromise the national security, foreign policy, and other objectives of these controls.

*Comment #3:* Three commenters asked BIS to address how this final rule and the DDTC final rule for USML Category XV, published in tandem with this rule, will apply to items previously exported from the United States.

*Response to Comment #3:* This interim final rule applies to all items subject to the EAR on the date this rule becomes effective, regardless of their geographic location or when they were originally exported. The transition plan for items moving from the USML to the CCL as part of Export Control Reform was described in final rules published by BIS and DDTC on April 16, 2013; 78 FR 22660 (Revisions to the Export Administration Regulations: Initial Implementation of Export Control Reform) and 78 FR 22740 (Amendment to the International Traffic in Arms Regulations: Initial Implementation of Export Control Reform). These rules

contain a description of how items are controlled during the transition period. Any item subject to the EAR, including under these new regulations, must comply with the EAR for all subsequent exports, reexports and transfers (in-country) beginning on the date the change becomes effective. Any foreign parties who wish to reexport or retransfer items transitioned to a 9x515 or other ECCN should reclassify their items and comply with the EAR by the time the change becomes effective. If the reexport or retransfer is authorized under an active DDTC license, and the party wishes to engage in the transaction under the EAR, they should review the ITAR Initial Implementation of Export Control Reform at 78 FR 22747 or contact DDTC for further guidance.

*Comment #4:* One commenter claimed that most companies will not avoid future DDTC licensing fees because one or more products will remain on the USML.

*Response to Comment #4:* BIS agrees that some companies involved in the satellite industry will now have items subject to both the EAR and the ITAR. However, BIS believes that many companies will now only have items subject to the EAR and others' items will remain wholly subject to the ITAR. It is not the purpose of the Export Control Reform effort to remove all items from the control of the ITAR or EAR merely for the sake of changing controls. Rather, the purpose is to apply the right level of control to items of different sensitivities based on national security and foreign policy considerations. In general, items that warrant essentially worldwide controls with few exceptions and that otherwise warrant the controls of the ITAR for the reasons described in the preamble are in USML Category XV. Other items pertaining to satellites and other spacecraft that do not warrant control on the ITAR, but that nonetheless warrant or are required to be controlled, will become subject to the EAR. The structure of the EAR allows for more tailored controls. Less sensitive items can be controlled differently to different destinations under different circumstances.

*Comment #5:* Two commenters recommended a formal interagency review process for continued revision of USML Category XV and the transition of items to the 9x515 ECCNs.

*Response to Comment #5:* BIS agrees that a formal interagency review process for continued revision of USML Category XV and the transition of items to the 9x515 ECCNs is warranted. BIS and DDTC are publishing their respective rules as interim final rules

because both acknowledge that several parts of the new regulations warrant additional and, indeed, continued review based on evolving technologies and commercial applications for what were once exclusively military or intelligence applications. In particular, BIS, DDTC, and the other relevant agencies will continue to study the interim final controls on remote sensing satellites to determine whether additional revisions are warranted. BIS and DDTC acknowledge that, as published, the ITAR will continue to control some satellites that have civil or commercial application. BIS and DDTC may or may not determine that additional revisions are warranted to these and the other controls in these interim final rules. They will publish a final rule taking into account public comments received, within six months of the effective date of this rule. The Departments of State, Commerce, and Defense will also announce separately their plans to re-create the Space Technology Working Group in order to establish a regular process for discussing with industry developments in space-related technologies and applications.

*Comment #6:* One commenter suggested that BIS revise 15 CFR 732.2(b)(1) to read: "If your technology or software is publicly available and therefore outside the scope of the EAR, you may proceed with the export or reexport." The commenter argues that deletion of the phrase "if you are not a U.S. person subject to General Prohibition Seven" would be consistent with all other parts of the EAR, which treat publicly available information as outside the scope of the EAR and with the proposed revisions to 22 CFR 120.9 that "defense service" means furnishing of assistance using "other than public domain information" in the companion proposed DDTC rule.

*Response to Comment #6:* BIS does not accept this comment because it is outside the scope of the May 24 (spacecraft) rule and, in any event, the concern is unwarranted. By definition, technology or software that is publicly available is not subject to the EAR. See § 734.3(b)(3) of the EAR. Additionally, General Prohibition No. 7 imposes restrictions on all U.S. persons engaged in prohibited activities regardless of whether any technology involved is publicly available. Therefore, the removal of the reference to General Prohibition No. 7 would be misleading.

*Comment #7:* One commenter argued that only half of the countries listed in Country Group D:5 are labeled in 22 CFR 126.1 as subject to arms embargoes (10 U.N. embargoes plus three

unilateral—Burma, China, Sudan). The commenter argues that, therefore, the restrictions on exports to the countries listed in Country Group D:5 in the EAR May 24 (spacecraft) rule are more restrictive than apparently intended, identifying the proposed revisions to §§ 734.4, 736.2(b)(3), 740.2(a)(12), 740.9(a), 740.10(a)(3)(viii) and (b)(3)(i)(F), 742.4(b)(1)(ii), and 742.6(b)(1).

*Response to Comment #7:* BIS does not accept the change suggested by the commenter. Country Group D:5 accurately reflects the countries currently identified in § 126.1 of the ITAR as being subject to a U.S. arms embargo. BIS will review all license applications for export to destinations in Country Group D:5 consistent with the applicable U.S. arms embargo policy for that destination set forth in § 126.1 of the ITAR. This means, for example, that if the State Department would deny a license to export a USML Category XV item to a country in the ITAR's § 126.1 then the Commerce Department would deny a license to export a 9A515 item to the same country, all other facts being the same. If the State Department would have approved the license, then the Commerce Department would approve the license, all other facts being the same.

#### ***De Minimis Comments***

*Comment #8:* One commenter suggested revising the de minimis level for foreign-made commercial satellites or components containing 9A515 parts and components so that the foreign-made satellites could be reexported to the People's Republic of China (PRC) without a license as not subject to the EAR if they contained 25% or less U.S.-origin controlled content.

*Response to Comment #8:* BIS rejects the change suggested by the commenter. BIS has determined that the 2013 NDAA authorizing the removal of "spacecraft" and related items from the USML mandates that de minimis treatment is not available for any 9A515 items incorporated into "spacecraft" reexported to the PRC. Even if BIS had the discretion under the 2013 NDAA to allow 25% de minimis treatment for reexports to the PRC, BIS has determined that it is in the national security and foreign policy interests of the United States to maintain the 0% de minimis treatment for 9A515 items with respect to their export and reexport to the PRC, in whole or as part of foreign-made systems and other items.

## Licensing Requirements and Licensing Policy Comments

*Comment #9:* One commenter suggested that BIS should ensure dual licensing is not required.

*Response to Comment #9:* As part of the review of USML Category XV and the public comments, BIS has worked diligently to avoid the potential for dual license requirements. However, in the event that a dual license requirement does arise, as part of the initial implementation of Export Control Reform, BIS and DDTTC created new regulatory mechanisms to allow DDTTC to license items subject to the EAR when used in or with defense articles on the USML. See § 734.3(e) of the EAR and § 120.5(b) of the ITAR.

Additionally, as described above, to address the potential for dual licensing, the revised USML Category XV and the 9x515 controls have been revised, through the addition of a note to USML Category XV and to 9A515 to allow the incorporation of USML items into spacecraft controlled in 9A515 without the resultant satellite's being subject to the ITAR.

*Comment #10:* One commenter requested that BIS clarify the on-orbit satellite registration transfer licensing requirements. For example, are license requirements based on purchaser's place of incorporation or ownership?

*Response to Comment #10:* BIS controls, within the definition of "reexport" the transfer of registration of a satellite or operational control over a satellite from a party resident in one country to a party resident in another country. For transfers to corporations, licensing will be based on the country of residency of the corporation, such as the country of incorporation or the country of its primary place of business. See § 772.1 of the EAR. BIS appreciates that this part of the definition, which has not been applied since satellites were transferred to the control of the State Department in 1999, will require refinement as new business patterns are presented. BIS encourages the public to submit comments while this rule is an interim final rule to help clarify the scope of the licensing and other obligations with such transactions.

*Comment #11:* One commenter asked BIS to clarify the phrase "destined to a country" in the context of license requirements for the export and reexport of "spacecraft." Specifically, the requester asked if an export is only to the end-user country, or whether it would include the country of any party in temporary contact with the item while it is transiting one of these countries. The requester also asked, if a

commercial communications satellite incorporating a U.S. component controlled under 9A515.x were to transit through, be handled by a national of (e.g., in a transport container), or be launched from a country listed in Group D:5, would a de minimis rule of 0% be applicable?

*Response to Comment #11:* The EAR generally imposes license requirements based on the country of ultimate destination. With the exception of those countries identified in General Prohibition 8 (§ 736.2(b)(8) of the EAR), transiting a country en-route to the ultimate destination is not a licensable event. However, under the EAR, "spacecraft" have two potential countries of ultimate destination, the country where a space launch occurs and the country that will have control over the "spacecraft" after launch. The 0% de minimis threshold for D:5 countries applies to both the country of launch and the country of control.

*Comment #12:* One commenter stated that the last sentence of proposed § 742.6(b)(1) set out a policy of denial for 9x515 items to the PRC that is more restrictive than the case-by-case review for licenses for "600 series" items to the PRC and stated that treating the 9x515 items more restrictively than the "600 series" with respect to licensing policy to the PRC is inconsistent with the reasoning for treating 9x515 more liberally than "600 series" in other respects, such as License Exception Strategic Trade Authorization (STA) restrictions to other countries.

*Response to Comment #12:* BIS has determined that the 2013 NDAA authorizing the removal of "spacecraft" and related items from the USML mandates a policy of denial for export licenses of 9x515 items to the PRC. BIS has adopted such a policy of denial with regard to National Security controls in § 742.4(b)(1)(iii) and with regard to Regional Stability controls in § 742.6(b)(1). As described in § 742.4(b)(1)(ii) and § 742.6(b)(1) exports of both 9x515 and "600 series" items destined to countries in Country Group D:5, including the PRC, will be reviewed consistent with the review policies set forth in § 126.1 of the ITAR for U.S. arms embargos.

*Comment #13:* One commenter stated that it is inappropriate for BIS to adopt a policy of denial for exports to countries subject to arms embargoes (such as the PRC) of 9x515 items, which include many items that are commercial items with no military or intelligence applications.

*Response to Comment #13:* BIS has determined that the 2013 NDAA authorizing the removal of "spacecraft"

and related items from the USML mandates a policy of denial for export licenses of 9x515 items to the PRC, North Korea, and any country that is a state sponsor of terrorism. Therefore, BIS has adopted a policy of denial for such items to these destinations. Further, BIS has determined that the 2013 NDAA mandates a presumption of denial for the export of 9x515 items to any country with respect to which the United States maintains a comprehensive arms embargo. To give effect to the United States arms embargoes, BIS will review all 9x515 licenses consistent with the United States arms embargo policies set forth in § 126.1 of the ITAR.

*Comment #14:* One commenter stated that § 750.7(i) of the EAR provides that a foreign entity is not bound by the prior STA Consignee Statement and Destination Control Statement associated with 9x515 and "600 series" items when retransferring or reexporting the items under the authority of de minimis after integration into a larger assembly or as a result of an additional applicable license exception, providing examples of License Exception Additional Permissive Reexports (LE APR at § 740.16) and License Exception Temporary Imports, Exports and Reexports (LE TMP at § 740.9).

*Response to Comment #14:* Section 750.7(i) of the EAR is a provision that allows an exporter who obtained an individually validated license from BIS to no longer be bound by the license conditions attached to that authorization in the event that the EAR has been amended to either authorize the transaction on the license under a license exception or to remove the license requirement from that transaction. It has no effect in the absence of a license.

Additionally, for an export under License Exception STA to be valid, all parties must ensure compliance with all the requirements of License Exception STA, including those attested to in the Prior Consignee Statement. Further, any foreign-origin item incorporating US origin 9x515 or "600 series" content will always be subject to the 0% de minimis threshold for shipments to countries in Country Group D:5 and will require a license for any such shipments.

*Comment #15:* One commenter asked BIS to create a streamlined export licensing process for programs (such as insurance) that typically include multiple parties, or are in multiple countries with multiple third-country nationals and dual nationals.

*Response to Comment #15:* BIS licensing processes and procedures are

described in Part 748 of the EAR, and applications are submitted through the SNAP-R application on the BIS Web site. One aspect of the reform effort that is outside the scope of this rule but relevant to the comment is that BIS has the authority to generally structure licenses in a flexible manner to accommodate both applicant's issues as well as the national security, foreign policy, and other reasons the items at issue warranted control. BIS thus encourages the commenter to contact the relevant licensing officer to discuss issues regarding the structuring of any particular license applications the commenter has in mind.

*Comment #16:* One commenter recommended that BIS create a CCL licensing practice or policy by which a satellite manufacturer or operator could obtain a single cradle-to-grave program license that would cover all manufacturer-client interactions, beginning with marketing and sales activities and including contract discussions, delivery negotiations, and on-orbit support. Even if a separate license for launch services would also be required, a single license covering all other activities would be invaluable.

*Response to Comment #16:* BIS agrees that having a single program under one license is a desirable outcome for compliance purposes. If an applicant can define the total activity that is subject to EAR—namely, the end users, end uses, destinations, and specific items at issue in the program at issue—BIS generally has the authority and capability to approve such transactions under a single license. With respect to marketing and sales activities that may occur without a specific license, the commenter should review License Exception Technology and Software Unrestricted (TSU) (§ 740.13).

### License Exceptions

*Comment #17:* One commenter suggested deleting § 740.2(a)(7) to allow the use of license exceptions for the export of “space-qualified” items that had remained subject to the EAR.

*Response to Comment #17:* BIS accepts the change suggested by the commenter. Section 740.2(a)(7) was a limitation on the use of license exceptions for certain “space-qualified” items that remained subject to the EAR following the transfer of jurisdiction for satellites and related items to DDTC. With the revision to USML Category XV, BIS has determined that it is inconsistent with the purpose of the new controls and the availability of certain license exceptions, to continue to prohibit the use of license exceptions for “space-qualified” items controlled in

other ECCNs. To determine which license exceptions are available for each ECCN, please review the specific ECCN and Part 740 of the EAR.

*Comment #18:* One commenter suggested revising proposed § 740.2(a)(17) to allow License Exception STA for technology described in proposed 9E515.b.

*Response to Comment #18:* BIS does not accept the change suggested by the commenter. BIS has revised 9E515 to clarify the technology controlled in paragraph .b. Section 740.2(a)(17) still prohibits the use of License Exception STA for the technology described in 9E515.b (and 9E515.d and .e with respect to radiation-hardened microelectronic circuits), but the universe of technology described has been revised so that it is more clear.

*Comment #19:* One commenter suggested allowing a license exception for “deemed exports” for amateur radio satellite design and construction to allow the free exchange of ideas, software, and other activities pertaining to amateur radio satellite design and construction with foreign nationals who are citizens of nations listed in the License Exception STA Country List.

*Response to Comment #19:* Security concerns resulting from the deemed export of technology in 9E515.b that led to the restriction on STA eligibility do not depend on the commercial nature of the transactions. Therefore, BIS does not accept the change suggested by the commenter.

*Comment #20:* One commenter noted that the ITAR contains a specific exemption for the export by U.S. institutions of higher learning of satellites for fundamental research purposes under § 123.16(b)(10), which has not been incorporated into the proposed EAR 500 series.

*Response to Comment #20:* BIS accepts the change suggested by the commenter and has created a new paragraph (e) in License Exception Aircraft and Vessels (AVS) to recreate the scope of ITAR § 123.16(b)(10) in the EAR in a manner consistent with the structure of the EAR and the less sensitive nature of the items that have moved from USML Category XV. The new § 740.15(e) allows the export of “spacecraft” and other commodities controlled in 9A515 by accredited institutions of higher learning in the United States to countries that are members of NATO (see § 120.31 of the ITAR), European Space Agency or the European Union, or are major non-NATO allies (see § 120.32 of the ITAR), and other countries that are not subject to embargoes, when fabricated only for the purpose of fundamental research.

This rule also changes the name of License Exception AVS to “Aircraft, Vessels, and Spacecraft.”

*Comment #21:* Two commenters stated that multiple provisions in the ITAR that are essential to university-based research have not been carried over to the EAR, including 22 CFR 123.16, 22 CFR 125.4(b)(7), and 22 CFR 125.4(b)(9).

*Response to Comment #21:* The commenters' assertions are not completely correct. Certain ITAR license exemptions identified by the commenter have preexisting parallel provisions in the EAR. For exemptions found in ITAR § 125.4(b)(7), the commenter should review License Exception TMP at § 740.9(b)(3). For those found in ITAR § 125.4(b)(9), the commenter should review License Exception TMP at § 740.9(a)(1) and License Exception GOV at § 740.11(b). As detailed above in the response to Comment #20, ITAR § 123.16(b)(10) has been replicated in the EAR in the new paragraph (e) of License Exception AVS (§ 740.15). Additionally, License Exception STA at § 740.20 does authorize many of the transactions authorized under ITAR § 123.16(b)(10) and the other exemptions. If, upon further review, the commenter identifies transactions that would be exempt from an individual licensing requirement in the ITAR that would not be for the same transaction involving items that have become subject to the EAR, all other facts being equal, then it should inform BIS of such information.

*Comment #22:* Two commenters stated that the utility of license exceptions in the EAR will be significantly limited for any items or technologies that are subject to control for MT reasons, including portions of the 9x515 ECCNs created by this rule. The commenters requested that BIS consider ways that the EAR can be adjusted to prevent items that are transferred to the CCL from creating more of a licensing burden than they were under the ITAR.

*Response to Comment #22:* BIS has determined that certain uses of MT-controlled items in “spacecraft” meet the criteria for the applicability of license exceptions and is revising § 740.2(a)(5)(i) to allow the use of license exceptions for certain MT-controlled items when exported as part of a “spacecraft” or in quantities appropriate for replacement parts. BIS is also adding 7A105, for certain GPS systems that were previously ITAR controlled, and 9A515, for certain spacecraft, related items, radiation hardened microelectronic circuits and parts, components, accessories and

attachments that were previously ITAR controlled, to the list of ECCNs that are eligible for the use of certain license exceptions for MT items. BIS is prohibited by statute from further amending licensing obligations for items that are MT controlled.

*Comment #23:* Two commenters stated that License Exception STA should apply to all of 9D515 and 9E515.

*Response to Comment #23:* BIS does not accept the change suggested by the commenter. Certain software, listed in 9D515.b (to be effective on November 10, 2014), .d, and .e, is excluded from STA eligibility based on the national security concerns related to the export of the referenced software. Similarly, the technology in 9E515.b (to be effective on November 10, 2014), .d, and .e is excluded from STA eligibility based on the national security concerns related to that technology. The commenter should nonetheless review the revisions to 9D515 and 9E515 that clarify the scope of the STA exclusions from the ECCNs.

*Comment #24:* One commenter suggested that BIS allow small- and medium-sized companies the ability to quickly support new startups and ventures with companies in countries authorized as destinations in License Exception STA in paragraphs (c)(1) and (2).

*Response to Comment #24:* License Exception STA is not authorized to Country Group A:6 (the countries authorized in paragraph (c)(2) of License Exception STA) for any 9x515 items. However, License Exception STA is available for exports to countries in Country Group A:5 (the countries authorized in paragraph (c)(1) of License Exception STA) for most of the items controlled in 9A515, 9D515 and 9E515, and all the items controlled in 9B515.

Certain specific “spacecraft,” controlled in 9A515.a, that provide space-based logistics, assembly or servicing to another spacecraft are excluded from automatic eligibility for License Exception STA. To use License Exception STA for these “spacecraft,” the exporter must submit a request to BIS, in accordance with § 740.20(g) (License Exception STA eligibility requests for certain 9x515 and “600 series” end items), for a determination by BIS that the item is eligible for License Exception STA. This rule revises § 740.20(g) to add the specific 9A515.a “spacecraft” to the list of items authorized for determination under that paragraph and revises the heading to include a reference to 9x515.

*Comment #25:* One commenter noted that the ITAR includes a license exemption in § 125.4(b)(7), allowing the

return of technical data to the original source of import, and requested that it be brought to the EAR.

*Response to Comment #25:* The exports authorized by § 125.4(b)(7) of the ITAR will generally be authorized by License Exception TMP § 740.9(b)(3) for items subject to the EAR. It is comparable in that it allows the return of items to the country of origin, except for Cuba, if the original items had not been enhanced. This license exception does not allow the dissemination of technology that has been revised, or in any way improved, while in the United States. Such actions create U.S.-origin technology, which would be subject to the EAR and may require a license for export. If the commenter can identify a transaction where License Exception TMP is more restrictive than ITAR § 125.4(b)(7), then it should let BIS know.

#### **General Comments Related to ECCN 9A515**

*Comment #26:* Two commenters requested the insertion of a note to 9x515 that would make clear that non-U.S. origin items described in the ECCNs that are transferred to the United States would not be subject to the EAR, and therefore would not require a license in order to be re-transferred outside the United States.

*Response to Comment #26:* BIS does not accept the changed suggested by the commenter. All items in the United States, not otherwise excluded from BIS jurisdiction, are subject to the EAR, whether U.S.-origin or foreign origin. However, License Exception TMP (§ 740.9(b)(3)) does allow the return of items to their country of origin if unaltered while in the U.S. In addition, the export from the United States of a wholly foreign-made item does not mean that subsequent reexports of that item are subject to the EAR. See 15 CFR 734.3(a).

*Comment #27:* One commenter noted that 9A515 was drafted using catch-all phrases similar to the unrevised USML Category XV and suggested that BIS redraft 9A515 so that it used only positive controls, similar to the revised USML Category XV.

*Response to Comment #27:* BIS does not accept the change suggested by the commenter. As with the “600 series” ECCNs created to accomplish the rewrites of the other USML Categories, the 9x515 ECCNs necessarily include catch-all provisions to ensure continuity of control over all items removed from the USML. This is necessary because USML Category XV used catch-all phrases for its controls. Thus, the reform effort will result in more positive

controls on the USML, while maintaining catch-all controls on the CCL. As described in previous **Federal Register** notices, BIS believes the negative aspects of catch-all controls have been ameliorated through the creation of a relatively objective definition of “specially designed.”

*Comment #28:* One commenter asked if the new 9x515 ECCNs include only items that are transferred from the USML to the CCL, or if they also include items previously covered by other ECCNs (such as for example 9A004.b.) or items designated EAR99.

*Response to Comment #28:* BIS’s goal in drafting the 9x515 ECCNs is that they would control no more items than that were either (i) formerly controlled in USML XV that are no longer described in the revised USML XV or (ii) within the scope of the former 9A004.b, and that they would not control items (i) within the scope of existing “space-qualified” ECCNs or (ii) that are star trackers in 7A004 and 7A104. BIS believes that its decision to change the catch-all control parameter in 9A515.x from “space-qualified” to “specially designed” removes the uncertainty that EAR99 items would move up to 9A515.x through successful testing for use in space. BIS is unaware of any item that was properly determined to be subject to the EAR and as an EAR99 item that would be within the scope of 9A515.x or any other 9x515 ECCN paragraph. If the commenter believes otherwise, then he should notify BIS of the issue either during the interim period of this final rule or through the commodity classification process described in EAR § 748.3.

*Comment #29:* Two commenters requested that BIS separate out purely commercial items and subject them to lesser controls.

*Response to Comment #29:* Controls are based on the national security and foreign policy concerns associated with a particular item and are imposed at the levels that are warranted. Merely because something is commercial does not mean control is not warranted. Even purely commercial satellites provide a significant functionality that warrants significant control. Specifically, any satellite can, by virtue of its position in orbit above the earth, provide a platform with a global reach and the potential to carry alternative payloads that may have direct national security implications. Additionally, the technology related to the workings of commercial satellites provide the majority of the technology necessary to allow other countries to establish a space presence of significant concern as described in the report the Departments of Defense and State



provided to Congress in 2012 regarding controls on spacecraft. See Departments of Defense and State "Final Report," required by section 1248 of the National Defense Authorization Act of Fiscal Year 2010, available at [http://www.defense.gov/home/features/2011/0111\\_nsss/docs/1248\\_Report\\_Space\\_Export\\_Control.pdf](http://www.defense.gov/home/features/2011/0111_nsss/docs/1248_Report_Space_Export_Control.pdf) (the "1248 Report").

*Comment #30:* One commenter requested that BIS change the reasons for control on 9A515 from NS1 and RS1 to NS2 and RS2.

*Response to Comment #30:* BIS accepts the change suggested by the commenter for the new microelectronic circuit control described in 9A515.e. ECCN 9A515.e has an RS2 reason for control because it is for lower level radiation tolerant microelectronic circuits that do not raise the same national security concerns and do not require the same global license requirement as other space related items. The remainder of 9A515, except the new .y paragraph, has NS1 and RS1 reasons for control.

#### Comments Related to Spacecraft in 9A515.a

*Comment #31:* Two commenters suggested that "spacecraft" controlled in 9A515.a should remain "subject to the EAR" even if they incorporate a defense article listed on the USML.

*Response to Comment #31:* BIS accepts the change suggested by the commenter and has added a heading note at the top of the Items paragraph of 9A515 to state that "spacecraft" and other items described in 9A515 remain subject to the EAR even if defense articles described on the USML are incorporated into the items, unless they take on the characteristics described in Category XV(a) of the USML. The note also states that in all other cases, defense articles described on the USML are subject to the ITAR. DDTC has added a corresponding note to its revised USML XV. This note in 9A515 provides readers with a summary of the note on the ITAR excluding these integral and incorporated defense articles from the USML. As this represents a departure from the standard ITAR "see-through" rule, it is appropriate to call it to the reader's attention.

The 1999 NDAA mandates certain special export controls on the export of satellites and the performance of certain activities associated with the launch of a U.S.-origin satellite in a foreign country. The 2013 NDAA requires that the President provide for end-use monitoring of satellites and related items transferred from the USML to the CCL. As a result of the changes to

Category XV in response to public comment, certain end item satellites may not be subject to ITAR licensing for the export of those satellites, including when exported for launch. Therefore, DDTC has revised § 124.15 of the ITAR, which implements the 1999 NDAA mandate, to clarify which special export controls apply only to satellites and related items subject to the ITAR and which controls apply to all satellites and related items regardless of jurisdiction.

Mirroring these revisions to § 124.15 of the ITAR, BIS created new export license application requirements, consistent with the 1999 NDAA mandate and implementing the 2013 NDAA mandate, for satellites subject to the EAR. In Supplement No. 2 to Part 748, BIS added a paragraph (y) to describe the requirement, from the 1999 NDAA, for a Department of Defense approved technology control plan and a National Security Agency approved encryption control plan, or evidence of ongoing discussions to obtain approved plans, and evidence of arrangements for the Department of Defense to provide monitoring, to be provided to BIS with the application for an export license for a satellite.

The 1999 NDAA only mandates special export controls for licenses to export a satellite to a country that is not a member of the North Atlantic Treaty Organization (NATO) or a major non-NATO ally of the United States. However, in furtherance of the national security and foreign policy interests of the United States, BIS has the discretion to require evidence of compliance with special export control requirements in connection with licenses to export satellites or spacecraft subject to the EAR to a country that is a member of NATO or is a major non-NATO ally. Accordingly, paragraph (y)(2) of Supplement No. 2 to Part 748 states that a license application to export a satellite controlled by ECCN 9A515.a to such countries must include (i) a technology transfer control plan approved by the Department of Defense and an encryption technology control plan approved by the National Security Agency, or documentation from the Department of Defense that such plans are not required; and (ii) evidence of arrangements with the Department of Defense for monitoring of the launch or documentation from the Department of Defense that such monitoring is not required.

Regardless of a satellite's or spacecraft's jurisdictional status, ownership, or origin, the ITAR controls as a "defense service" the furnishing of assistance (including training) by a U.S.

person to a foreign person directly related to (a) the integration of a satellite or spacecraft to a launch vehicle or (b) launch failure analyses. See 22 CFR 121.1, USML XV(f).

*Comment #32:* Two commenters suggested that BIS control sub-orbital spacecraft that are "reusable launch vehicles" and designed to carry humans on-board and any "specially designed" carrier aircraft in 9A515. The commenters also suggested adopting definitions for "suborbital rockets" and "reusable launch vehicles" from the Federal Aviation Administration, Commercial Space Transportation regulations at 14 CFR 401.5.

*Response to Comment #32:* BIS is controlling in 9A515.a all "spacecraft" no longer listed on USML XV(a). The revised USML Category XV(a) does not list "spacecraft" "specially designed" for human habitation that do not incorporate propulsion and navigation systems. Therefore, these items are controlled in 9A515.a. All launch platforms and launch vehicles remain subject to the ITAR.

BIS recognizes that commercial spaceflight and specifically, sub-orbital commercial space flight, is a significant emerging industry and that these activities are being regulated by the Federal Aviation Administration as commercial activities. However, the technology that is at the heart of the ability to put a commercial vehicle into space and return to earth is often the same technology that would allow the delivery of weapons of mass destruction and other activities that present significant national security concerns. At this time, BIS is unable to draw a line between the commercial applications of these capacities and the inherently military potential of launch and reentry that would warrant their controls on the CCL. Therefore, these systems will remain on the USML, regardless of their potential commercial applications. BIS recognizes that the continued control of spacecraft with commercial applications on the USML is a significant issue for industry and that more work is required to further refine the controls in this area. The U.S. Government has committed to continue to review the issue and, to the extent further revisions to the controls in this rule are warranted, BIS will make them in coordination with the Department of State.

*Comment #33:* One commenter stated that Servicing Mission Extension Vehicles do not appear on the USML but are also not listed specifically in the Note to 9A515.a.

*Response to Comment #33:* Servicing Mission Extension Vehicles, to the extent that they incorporate a



propulsion and guidance system, are listed on the revised USML Category XV at (a)(4) and thus are not “subject to the EAR.” Servicing Mission Extension Vehicles, and other “spacecraft” that provide space-based logistics, assembly or servicing of any spacecraft (e.g., refueling), which do not have integrated propulsion, beyond attitude control, are “subject to the EAR” and controlled in 9A515, but are not immediately eligible for License Exception STA.

*Comment #34:* Two commenters suggested adding the phrase “satellites not otherwise enumerated in USML Category XV” to the note to 9A515.a, to make clear that any satellites not specifically listed under USML Category XV are covered under 9A515.a.

*Response to Comment #34:* The suggested phrase is included in the control text of 9A515.a. Thus, BIS has determined that it is unnecessary to add it to the note as well.

*Comment #35:* One commenter suggested adding the words “or controlled by 9A004” in 9A515.a after the phrase “not enumerated in USML Category XV” to clarify that the International Space Station (ISS) and other items controlled in 9A004 are not controlled in 9A515.

*Response to Comment #35:* BIS accepts the change suggested by the commenter in principle and has added the words “or described in 9A004” to the description of items controlled in 9A515.a. This excludes all items described in 9A004 from 9A515.a. As the ISS is not controlled in 9A515.a, the parts, components, accessories and attachments “specially designed” for the ISS are not controlled in 9A515.x.

*Comment #36:* One commenter suggested revising the MT paragraph in 9A515 to read: “MT applies to 9A515.d when also described in 3A101.a.”

*Response to Comment #36:* BIS does not adopt this suggestion because quoting the Missile Technology Control Regime (MTCR) text is more precise.

*Comment #37:* One commenter suggested defining the term “usable” in the MT paragraphs for 3A001.a.1.a and 9A515 d. to reference a specific characteristic of to refer to a standard.

*Response to Comment #37:* BIS acknowledges that the phrase “when usable in missiles for protecting missiles against nuclear effects (e.g. Electromagnetic Pulse (EMP), X-rays, combined blast and thermal effects)” can be difficult to apply in certain circumstances. However, this is the multilaterally agreed MTCR text, and BIS has determined that by providing a reference to a specific standard, the United States would be deviating from its regime commitments. If an exporter

has particular issues warranting clarification, then it should submit an advisory opinion request under § 748.3(c).

#### **Comments Related to 9A515.d and 9A515.e**

*Comment #38:* Six commenters requested that items described in USML Category XV(d) be transitioned to 9A515 on the date of publication of this final rule.

*Response to Comment #38:* BIS agrees on the need to accelerate implementation of the transition of the radiation-hardened microelectronic circuits from the USML to the CCL. Microelectronic circuit development has advanced to a stage where manufacturers are concerned that the next generation of purely commercial microelectronic circuits may meet or exceed the parameters listed in USML Category XV(d). It is necessary to quickly transition these items to the CCL to avoid requiring that these commercial manufacturers register with DDTC and obtain ITAR licenses for the development of these items. In the final rule revising Category XV, DDTC has provided that the effective date for the deletion of USML Category XV(d), microelectronic circuits controlled by XV(e), and directly related technical data and software controlled by XV(f), will be 45 days following the publication of the final rule, the minimum period permitted for a major regulatory action. Therefore, BIS has also provided that this rule will transition those items to 9A515.d, 9A515.e, 9D515.d, 9D515.e, 9E515.d, and 9E515.e, respectively, 45 days following the publication of the final rule, on June 27, 2014.

*Comment #39:* One commenter asked BIS to clarify Notes 2 and 3 to 9A515.d to state which microelectronic circuits are intended to be controlled under 3A001 as opposed to 9A515.x.

*Response to Comment #39:* BIS has revised the controls on microelectronic circuits that fall below the threshold described in 9A515.d. BIS has created a new paragraph .e that controls certain microelectronic circuits that are “specially designed” for defense articles controlled by USML Category XV or items controlled by 9A515 and meet two technical parameters (1) a total dose  $\geq 1 \times 10^5$  Rads (Si) ( $1 \times 10^3$  Gy(Si)) and  $< 5 \times 10^5$  Rads (Si) ( $5 \times 10^3$  Gy(Si)) and (2) a single event effect (SEE) (i.e., single event latchup (SEL), single event burnout (SEB), or single event gate rupture (SEGR)) immunity to a linear energy transfer (LET)  $\geq 80$  MeV-cm<sup>2</sup>/mg. BIS has also excluded all microelectronic circuits from 9A515.x.

Therefore, microelectronic circuits that meet the control criteria of either 9A515.d or 9A515.e are the only microelectronic circuits controlled in 9A515. All other microelectronic circuits subject to the EAR will be controlled based on their technical parameters in the appropriate ECCN or designated as EAR99 items.

*Comment #40:* One commenter asked that BIS insert into Note 1 of 9A515.d a statement adopting the longstanding definition of “ASIC” put forward by the JEDEC Solid State Technology Association—namely that an ASIC is “an integrated circuit developed and produced for a specific application or functions and for a single customer.”

*Response to Comment #40:* BIS accepts the commenter’s suggestion to provide a definition of ASIC or application specific integrated circuits. In Note 1 to 9A515.d and .e, BIS has included the phrase “integrated circuits developed and produced for a specific application or function” following the term ASIC to provide definition to the term. BIS does not accept the commenter’s suggestion that the term ASIC be limited to items produced for a single customer. Such language could lead to unintended drops in controls. Additionally, this Note 1 to 9A515.d and the new .e is a reference to the USML control in USML Category XI(c). Items are controlled on the USML if described therein, regardless of whether they are also within the scope of a particular ECCN. This note has no substantive effect on items that are controlled as ASICs on the USML. It is merely a cross reference inserted for the convenience of the exporter.

*Comment #41:* One commenter noted that the fourth and fifth technical parameters contained within 9A515.d differ from the fourth and fifth technical parameters contained within the prior USML Category XV(d). The commenter asks why those changes have been made, and whether there is any need for them. The commenter suggests that the five technical parameters contained within USML Category XV(d) should be replicated exactly in 9A515.d.

*Response to Comment #41:* The comment is correct that the words of the fourth and fifth technical parameters contained within 9A515.d are slightly different from those in prior USML Category XV(d). These controls have been updated and clarified, so BIS does not accept the request to revert to the previous controls. Anything that did not meet previous USML Category XV(d) controls will not be captured by the new 9A515.d parameters.

*Comment #42:* One commenter noted that some items currently listed under

other CCL ECCNs (e.g., 3A001) contain microelectronic circuits that have all of the specifications listed under 9A515.d. The commenter asks whether the microelectronic circuits meeting the described specifications that are currently controlled under other ECCNs will be moved into 9A515.d.

*Response to Comment #42:* Microelectronic circuits are controlled in 9A515.d when they meet or exceed the five technical parameters described in the subparagraph and are “specially designed” for a defense article, a 600 series item, or an item in 9A515. The criteria in 3A001.a are also controlled in 9A515.d. However, 9A515.d describes a higher level of technical parameters than 3A001.a. Therefore, if a microelectronic circuit meets or exceeds the same three criteria in 9A515.d, but does not meet or exceed the remaining two 9A515.d criteria, then 3A001.a will apply. However, all items controlled in 9A515.d were previously subject to the ITAR pursuant to USML Category XV(d). Therefore, nothing described in 9A515.d could have been properly classified as 3A001.a. Moving forward, under the Order of Review (see § 774, Supplement No. 4), exporters must review the 9x515 ECCNs and “600 series” prior to reviewing other ECCNs. Therefore, if an item is described in 9A515.d, or the new 9A515.e, it will be controlled in those paragraphs, even if it also meets the technical parameters in 3A001 or any other ECCN.

#### Comments Related to 9A515.x

*Comment #43:* One commenter requested that BIS not apply NS1 and RS1 reasons for control to 9A515.x.

*Response to Comment #43:* BIS does not accept the change suggested by the commenter. The items controlled in 9A515.x are “specially designed” for spacecraft and space applications, and thus raise national security and foreign policy concerns. Therefore, the U.S. Government will require visibility into the export of these items. Applying NS1 and RS1 reasons for control requires world-wide licensing, other than exports to Canada. Allowing the use of License Exception STA for most items to our 36 closest allies and partners provides significantly more record of the transactions than allowing No License Required (NLR) shipments.

*Comment #44:* Two commenters stated that the 9A515.x control parameter should be “specially designed.”

*Response to Comment #44:* BIS accepts the change suggested by the commenter. BIS agrees that the use of the control parameter “space-qualified” in 9A515.x was potentially confusing

and has changed it to “specially designed.” The structure of 9A515.x will now track the structure of all “600 series” entries, in that, with small exceptions, it will be a catch-all control for all parts, components, accessories, and attachments “specially designed” for items in 9A515 or USML Category XV and not themselves controlled in USML Category XV. The exceptions pertain to (i) microelectronic circuits, (ii) star trackers in 7A004 and 7A104, and (iii) already existing multilateral controls on “space-qualified” items controlled elsewhere in the CCL.

*Comment #45:* One commenter asked whether 9A515.x will capture all spacecraft “parts,” “components,” “accessories,” and “attachments” not controlled under paragraph (e) of USML Category XV or listed under other specific ECCNs above, or will other ECCNs that currently control spacecraft components (e.g., 7A004 or 7A104) continue to do so. Specifically, the commenter requested clarification on which ECCN will control the solar concentrators, power conditioners and/or controllers, bearing and power transfer assemblies, deployment hardware/systems for solar arrays, “space-qualified” star trackers and “space-qualified” gyro-astro compasses currently controlled under Category XV(e). The commenter also stated that delineating which items are controlled by each of these ECCNs would help satellite component manufacturers understand which controls apply to their products.

*Response to Comment #45:* BIS has clarified 9A515.x in this final rule so that the star trackers (except the star tracker specified in USML Category XV(e)) and gyro-astro compasses controlled in 7A004 and 7A104 are not controlled in 9A515.x. All other “parts,” “components,” “accessories,” or “attachments” that are specially designed for items in USML Category XV or 9A515 are controlled in 9A515.x unless listed on the ITAR, identified in another paragraph of 9A515, are a microelectronic circuit, or are controlled in one of the “space-qualified” ECCNs that are specifically excluded. BIS is unaware of any items that will be controlled by 9A515.x that were not previously controlled under USML Category XV(e). If the commenter is aware of such items, then it should provide a comment to BIS during the interim period of this rule or submit a classification request pursuant to EAR section 748.3.

*Comment #46:* One commenter asked BIS to confirm that space-related products that are currently designated with a specific ECCN or are designated

EAR99, will not be moved to either the USML, 9x515, or a “600 series” ECCN. The commenter requested that BIS include a specific statement to that effect, or if not true, include a grandfathering clause for such items already in inventory.

*Response to Comment #46:* Other than with respect to 9A004.b items that BIS is moving to 9A515, BIS is unaware of any items that will be controlled by 9A515 that were not previously controlled under USML Category XV. If the commenter is aware of such items, then it should provide a comment to BIS during the interim period of this rule or submit a classification request pursuant to EAR § 748.3.

*Comment #47:* Six commenters asked if, when a commercial-off-the-shelf (COTS) or other EAR99 item is successfully tested for operation in space, it becomes space-qualified with repercussions for the manufacturer, even though the original part may have been EAR99 and has not been modified.

*Response to Comment #47:* BIS believes that the other ECCNs that will continue to use “space-qualified” as the control parameter do not raise the same concerns for controlling otherwise EAR99 items on the basis of testing, as they are not catch-all controls. Additionally, this comment assumes that the qualification through testing of a single item will cause items other than the one tested to become space-qualified. As the note indicates, qualification through successful testing only applies to the actual unit tested.

*Comment #48:* One commenter stated that BIS should exclude building block electronic components that would qualify for exclusion from specially designed, even if they are individually tested or create a new ECCN for Space-Qualified Basic Building Block Electrical/Electronic Components with AT only controls.

*Response to Comment #48:* As noted above, BIS has revised 9A515.x in this final rule to use “specially designed” instead of “space-qualified” as the control parameter. To the extent that the item at issue is a microelectronic circuit, it will only be controlled in 9A515 if it meets the .d or .e control parameters. All other electronic components will be controlled by .x, regardless of significance, if “specially designed” for a 9A515 or USML Category XV item and not listed on the USML or one of the other ECCNs described in 9A515.x. The commenter should also review the procedures in EAR section 748.3(e) that allows one to petition BIS for removal of an item otherwise within the scope of 9A515.x and the re-designation of the item as a 9A515.y item.

*Comment #49:* One commenter suggested deleting 6A002.e from the list of “space-qualified” ECCN carved out of 9A515.x.

*Response to Comment #49:* BIS accepts the change suggested by the commenter. This paragraph was previously removed from the EAR.

#### Comments Related to the Application of “Space-Qualified”

*Comment #50:* One commenter stated that the note to the proposed EAR definition of “space-qualified” providing that the terms ‘designed’ and ‘manufactured’ in this definition are synonymous with “specially designed” is confusing. The purpose may have been to be sure that all “catch-all” components being removed from USML Category XV are covered by 9A515, but 9A515.x use of “space-qualified,” rather than “specially designed,” seems to make the Note unnecessary for this purpose.

*Response to Comment #50:* Although the comments related to the use of “space-qualified” are no longer relevant to 9A515.x because the paragraph will not use “space-qualified,” they are nonetheless relevant to other uses of “space-qualified” in the EAR.

The note to the definition of “space-qualified” that states that the terms ‘designed’ and ‘manufactured’ are synonymous with the definition of “specially designed” allows exporters to apply the newly defined term “specially designed” rather than force exporters to apply two new undefined terms ‘designed’ and ‘manufactured.’ This note prevents exporters from having to determine for themselves what, if any, difference exists between ‘designed’ and ‘manufactured’ and the term “specially designed.”

*Comment #51:* One commenter suggested to change “or” to “and” in the “space-qualified” definition. The modified definition would read: “. . . an article is “space-qualified” if it is designed, manufactured, and qualified through successful testing, for operation at altitudes greater than . . .” Another commenter suggested revising the second note to state that “specially designed” is synonymous with the phrase “designed, manufactured, or qualified through successful testing,” which would have the same effect.

*Response to Comment #51:* BIS does not accept these suggested changes for two reasons. First, this definition was agreed to as part of the 2012 amendments to the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies (Wassenaar Arrangement), and the internationally

agreed on language is incorporated into the EAR. Second, such a change would significantly reduce the scope of the space-qualified definition and result in less sensitive items not being controlled. An item may become space-qualified in two ways, if either (1) intentional steps were taken in the design and manufacture of the item to make it suitable for use in space, or (2) due to inconsistencies in the manufacturing process that cause variations in quality that result in only a subset of the production run to be suitable for use in space, individual items are qualified through testing.

*Comment #52:* Two commenters stated that the use of “or” in “*Designed, manufactured, or qualified through successful testing*” seems to contradict the second note, which intends to exclude parts and components which have not been “specially designed.” Conversely, the first note excludes items that are not individually tested. As radiation testing is destructive, industry practice is to test radiation tolerance on lot samples and not on the actual parts to be used on the spacecraft. The note would result in excluding from being “space-qualified,” parts determined to be radiation tolerant as a result of being of the same lot as samples successfully tested as radiation tolerant.

*Response to Comment #52:* BIS does not accept the changes suggested by the commenter. The existing definition in the EAR is identical to the definition that was adopted by the Wassenaar Arrangement. However, Commerce will keep in mind these comments when considering future modifications, if necessary, to the multilateral regime definition.

*Comment #53:* Four commenters asked BIS to establish parameters for testing that qualifies an item as “space-qualified.”

*Response to Comment #53:* The concern raised by the commenters is largely resolved by the change in .x to apply “specially designed” instead of “space-qualified” as the control parameter and creation of new 9A515.d and .e. Clarification of the use of the new “space-qualified” definition in the existing CCL entries should be resolved multilaterally as part of the WA process.

*Comment #54:* One commenter suggested that “space-qualified” should incorporate both the catch and release of “specially designed.”

*Response to Comment #54:* The designed or manufactured prong of “space-qualified” is synonymous with “specially designed” per the second note to the definition of “space-qualified,” and thus includes both the catch and release provisions of the

definition of “specially designed.” The qualified through successful testing prong of “space-qualified” operates independently of the designed or manufactured prong, and does not incorporate the “specially designed” release provisions.

*Comment #55:* One commenter asked BIS to confirm that the “space-qualified” criterion applies only to items that have been designed, manufactured or qualified through successful testing performed at U.S. premises or using U.S. technologies.

*Response to Comment #55:* For such entries, the “testing” element is not limited to testing done in the United States or using U.S.-origin technology. Other clarifications or revisions to “space-qualified” will need to be part of the multilateral regime discussions.

*Comment #56:* One commenter states that items should only be “space-qualified” if certified by the manufacturer. The commenter suggested that BIS add the following note “For purposes of this definition, “qualified” must be evidenced by an explicit rating or certification to operate at altitudes greater than 100 km above the Earth. Thus, any device certified by the manufacturer to be operative at altitudes greater than 100 km is “qualified through successful testing,” and any device not certified by the manufacturer to be operative at altitudes greater than 100 km is not “qualified through successful testing,” regardless of any testing performed by any party.”

*Response to Comment #56:* BIS does not accept the change suggested by the commenter. The purpose of qualification through testing in the “space qualified” definition is to control those items identified through testing to meet the requirements necessary to perform in space. It is not relevant what entity conducts the testing.

*Comment #57:* One commenter asked whether the note to the “space-qualified” definition means that each component must be tested separately to be “space-qualified.” For example, if only one of four identical components is successfully tested and thus qualified, would the four identical components be then all “space-qualified” or will only the one successfully tested be “space-qualified”?

*Response to Comment #57:* For items qualified through testing, only items actually tested are “space-qualified.” If an item is “space-qualified” as a result of design or manufacture, testing is not relevant.

*Comment #58:* Two commenters asked whether the definition of “space-qualified” allowed the “exclusion” for prior determination through a

commodity jurisdiction (CJ) determination or interagency-cleared commodity classification (CCATS) pursuant to § 748.3(e) in paragraph (b)(1) of the “specially designed” definition. If not, the commenters stated that a part that has been previously determined to be, for instance, EAR99 through a Commodity Jurisdiction could see its classification become 9A915.x by virtue of meeting the criteria of “space-qualified,” i.e. qualified through successful testing, for operations at altitudes greater than 100km above the surface of the Earth, even though the design, performances, and testing flow of this part are the same that had been previously reviewed by the U.S. Government during the CJ or CCATS process.

*Response to Comment #58:* As noted in Response to Comment #45, BIS has revised 9A515.x in this final rule to remove the “space-qualified” control parameter, replacing it with “specially designed.”

*Comment #59:* Three commenters stated that testing should only apply to the item tested.

*Response to Comment #59:* As stated in the first note to the “space-qualified” definition, only the item tested is qualified through testing. However, if an item is “space-qualified” as a result of design or manufacture, testing is not relevant.

*Comment #60:* Items are identified as “space-qualified” as a marker for high reliability and the level of control should not be increased to 9A515.x based on that criteria.

*Response to Comment #60:* As noted in Response to Comment #45, BIS has revised 9A515.x to remove the “space-qualified” control parameter, replacing it with “specially designed.”

*Comment #61:* One comment asked why the proposed rules only refer to categories 3, 6, and 9 in the “space-qualified” definition and what that means regarding the other categories of EAR.

*Response to Comment #61:* The term “space-qualified” only appears in ECCNs in categories 3, 6 and 9 of the Commerce Control List and the convention for Wassenaar Arrangement defined terms is to identify the categories in which they are used, if not common throughout the control list. As “space-qualified” is no longer the control parameter in 9A515.x, category 9 is removed from this list.

*Comment #62:* One commenter requested that BIS clarify how “required” applies to items with only a “space qualified” control parameter, particularly when qualified through testing.

*Response to Comment #62:* BIS has revised 9A515.x in this final rule to remove the “space-qualified” control parameter, replacing it with “specially designed.” Therefore, it is no longer necessary to determine how 9E515 controls apply to items that are controlled as “space-qualified” by virtue of testing.

#### Comments Related to 9A515.y

*Comment #63:* Two commenters suggested that BIS create a .y paragraph for items that only warrant AT control, including certain “space-qualified” basic building block electronic components.

*Response to Comment #63:* BIS accepts the suggestion to create a .y paragraph with an AT reason for control and prohibition on the export to China. Unlike the .y paragraphs in many of the “600 series” ECCNs, 9A515.y will not initially be a list of items. Rather, the control parameter will be “[i]tems described in 9A515.x that have been identified in an interagency-cleared commodity classification (CCATS) pursuant to § 748.3(e).” The reason for control on the .y paragraph, as with the other .y paragraphs in the “600 series” ECCNs, is Anti-Terrorism Column 1 (AT). Additionally, as with the other .y paragraphs, export to China is prohibited and § 744.21(a)(2) is amended to add a prohibition of the export of all items described in 9A515.y to China.

At the time of publication, no items are designated within the .y control. BIS will accept requests to designate 9A515.x items under § 784.3(e) as .y upon publication of this rule, but will not begin populating any .y controls until on or after the effective date of this rule.

#### Comments Related to 9B515

*Comment #64:* One commenter requested that BIS clarify the classification of encryption simulators used to test COMSEC encryptors when installed on a foreign manufactured satellite.

*Response to Comment #64:* Encryptors that are “specially designed” for spacecraft will be controlled in 9A515.x to the extent they are commodities or in 9D515 to the extent they are software. The simulators to test those items will not be controlled in a 9x515 ECCN. BIS has revised 9B515.a and .b so that the controls on test, inspection and production equipment controlled in 9B515.a and the equipment, cells and stands for testing, analysis and fault isolation in 9B515.b only apply to items “specially designed” for items in 9A515.a or

USML Category XV paragraphs (a) or (e). Therefore, simulators for testing a part, component, accessory or attachment controlled in 9A515.x are not controlled in 9B515.

*Comment #65:* One commenter has stated that it is unclear why the  $(10^{-4})$  Torr technical threshold has been included in 9B515.c. In general, the development of more advanced satellite designs has led to increases in design life, a feature that requires more demanding testing standards and more advanced testing equipment to validate these designs. It is, therefore, plausible that commercially available environmental test chambers could approach this threshold due to natural competitive pressures and the general interest among both satellite manufacturers and their customers in developing more reliable spacecraft. Unless there is a specific reason for the inclusion of this threshold, the commenter recommends that this control be removed.

*Response to Comment #65:* BIS accepts the changes suggested in this comment, in part. The control for the Torr technical threshold is currently in 1B018.b and it is deleted by this rule. The intent is to control chambers for “spacecraft.” The chambers will only be controlled in 9B515.c if “specially designed” for commodities enumerated in 9A515.a or USML Category XV(a).

#### Comments Related to 9D515

*Comment #66:* One commenter requested the addition of a note to 9D515 that clarifies the jurisdiction of software common to both USML and CCL satellites. The note should state that if software is not specially designed or modified for a satellite controlled under the USML, it is subject to the EAR and controlled under this ECCN.

*Response to Comment #66:* BIS does not accept the changes suggested by the commenter. Software is ITAR controlled if it meets the definition of § 120.10 of the ITAR (i.e., it is “required” for one of the functions listed in 120.10) and is also, per USML Category XV(f), “directly related” to a USML Category XV spacecraft or other defense article in USML XV. Software that is completely common to ITAR and EAR items would not meet this threshold. Thus, the requested note is not necessary.

#### Comments Related to 9E515

*Comment #67:* Ten commenters requested that BIS apply controls on the technology for the three defined terms “development,” “production,” and “use” and not apply control to technology on the six disjunctive elements of the defined term “use,”

namely operation, installation, maintenance, repair, overhaul and refurbishing. Two of the commenters further noted that technical data and technical assistance required for any one of the disjunctive elements of use does not fit within the Part 772 definition of technology as a threshold matter due to the use of the defined terms “development,” “production” and “use.” Additionally, one commenter noted that the expansion of technology controls to include operation, installation, maintenance, or repair activities in connection with 9x515 and “600 series” items is in contradiction to the approach DDTC appears to be taking in revising the ITAR definition of defense services and the potential revision of the definition of technical data.

*Response to Comment #67:* BIS adopted controls on elements of the defined term “use” for the “600 series” technology ECCNs, and proposed such controls for 9E515 to maintain continuity of control over the technical data and defense services for the items transitioning to the CCL that was controlled on the ITAR. Controls on the technology required for each of the listed disjunctive elements in each technology ECCN are appropriate to retain the necessary level of control consistent with the national security interests of the United States.

Specifically with regard to 9E515, this was also done to conform to the 1248 Report and to identify for Congress where all items controlled in USML Category XV are controlled on the CCL. In response to these comments, BIS, in consultation with other departments and agencies of the U.S. Government, has reviewed the use of various combinations of the disjunctive elements, operation, installation, maintenance, repair, overhaul and refurbishing, and determined that for most 9E515 technology, export controls on the technology for the operation and maintenance of those items are not necessary. BIS has also determined that all technology controls on the ground stations described in 9A515.b are unnecessary. Therefore, BIS has revised 9E515.a to exclude technology for items controlled in 9A515.b, 9A515.d, 9A515.e, and removed the words operation and maintenance. BIS also added a parenthetical following the word repair to make it clear that repair includes any on-orbit anomaly resolution and analysis when it goes beyond established procedures.

*Comment #68:* Five commenters suggested that 9E515 be revised to clarify any potential overlap between 9E515.a and 9E515.b.

*Response to Comment #68:* BIS has reviewed and revised 9E515 to clarify the difference between the technologies controlled in each paragraph, as described in Response to Comment #67.

*Comment #69:* Several commenters asked BIS and DDTC to confirm that various types of telemetry—i.e., communications to and from satellites and other spacecraft, whether on the ground, in the air, or in space—are not subject to the ITAR or the EAR, or, if so, to exclude them from the controls over satellite and spacecraft technology and technical data in USML Categories XV(f) and 9E515.

*Response to Comment #69:* Based on a review of the comments and the types of information pertaining to satellites and spacecraft that warrant control, BIS and DDTC have determined to codify existing policy within the regulations that data transmitted to or from a satellite or spacecraft, whether real or simulated, should not be subject to the ITAR and should not fall within the scope of the EAR’s definition of “technology,” if it is limited to information about the health, operational status, or function of, or raw sensor output from, the spacecraft, spacecraft payload, or its associated subsystems or components. Such information is often referred to as housekeeping data. In addition, the act of processing such telemetry data—i.e., converting raw data into engineering units or readable products—or encrypting it does not, in and of itself, cause the telemetry data to become subject to the ITAR or to ECCN 9E515. To implement this determination, DDTC has added a note to USML Category XV(f) that such information is not subject to the ITAR, and BIS has added a note to 9E515 that such information, to the extent it would be subject to the EAR, is not within the scope of information captured within the definition of “technology” in the EAR.

These notes do not indicate that other types of technical data, as defined in ITAR § 120.10, directly related to USML Category XV items and other types of technology, as defined in EAR § 772.1, required for 9A515 items are no longer controlled. In addition, the notes to USML Category XV(f) and 9E515 do not change the ITAR-control status of classified information directly related to defense articles and defense services on the U.S. Munitions List and 600-series items subject to the EAR, as well as information covered by an invention secrecy order. “Classified,” for these purposes, means that which is classified pursuant to Executive Order 13526, predecessor or successor order, or to the corresponding classification rules of

another government or international organization.

*Comment #70:* One commenter suggested that BIS delete the quotation marks around the term “technology” in 9E515 because these alterations would create a different definition for the term than the one that currently exists in the EAR.

*Response to Comment #70:* BIS does not accept the changes suggested by the commenter. BIS has denominated the technology that is appropriate for control given the national security concerns relevant to the various items controlled in the 9x515 ECCNs. BIS will be undertaking a larger project to review the technology definitions and controls in the EAR and to harmonize, where appropriate, the technology controls with those in the ITAR.

*Comment #71:* One commenter requested that BIS address how the terms installation, maintenance, repair, overhaul or refurbishing will apply to technology for items controlled in 9A515.a, end-item spacecraft. For example, would data provided to satellite operators for post-launch operations (e.g., orbit-raising) meet this definition? The commenter noted that the terms installation, maintenance, repair, overhaul or refurbishing seem to apply only to the ground control systems controlled under 9A515.b. The commenter requested that BIS revise 9E515 so that installation, maintenance, repair, overhaul or refurbishing technology are only controlled for ground control systems listed under 9A515.b, “equipment” controlled by 9B515, and “software” controlled by 9D515.

*Response to Comment #71:* As detailed in Response to Comment #69, BIS has revised 9E515.a so that it now controls technology “required” for the “development,” “production,” installation, repair (including on-orbit anomaly resolution and analysis beyond established procedures), overhaul or refurbishing of commodities controlled by 9A515 (except 9A515.d. or .e), 9B515, or “software” controlled by 9D515.a. 9E515.b now controls technology “required” for the “development,” “production,” e.g., failure analysis and anomaly resolution of software controlled by 9D515.b. One of the revisions to 9E515.a also makes clear that the control of repair technology includes on-orbit anomaly resolution and analysis, beyond established procedures. However, standard post-launch operations (e.g., orbit-raising), orbit maintenance and other movement of the spacecraft on-orbit do not fall within the controlled technology. If an exporter has any

question whether certain specific information is technology for an item in 9A515.a, BIS recommends that the exporter submit a classification request to BIS and this will be a fact-based inquiry.

*Comment #72:* One commenter suggested that export licensing requirements should only focus on the export of hardware, such as amateur radio satellite subsystems or complete amateur radio satellites, and not on technology related to that hardware.

*Response to Comment #72:* BIS does not accept the change suggested by the commenter. Technology for commodities and software is often just as significant, and is sometimes even more significant, than the commodities derived from the technology. Teaching other countries how to design, develop or produce these items imparts the capacity to create the items domestically. Therefore, BIS continues to maintain controls on technology. However, BIS has reviewed 9E515 and, as discussed in Response to Comment #69, has excluded controls on operation and maintenance technology for most items and expanded the scope of technology eligible for License Exception STA.

*Comment #73:* One commenter stated that this rule should do more to unburden university research and teaching regarding space technology.

*Response to Comment #73:* BIS understands that compliance with export controls in the university context can be complex and appreciates all the efforts by colleges and universities to vigilantly maintain compliance with the EAR and the ITAR. Although export controls are required on the basis of national security concerns arising from the potential proliferation of these items, BIS notes that classroom instruction is often not subject to the EAR. See § 734.9 of the EAR.

*Comment #74:* Four commenters stated that BIS should not attach license conditions to technology transfer licenses that are similar to the current DDTC TAA provisos.

*Response to Comment #74:* Licensing decisions and the license conditions attached to specific licenses are driven by the national security implications of the specific transaction under consideration. Specific license conditions are not set out in the regulations and, therefore, discussion of the appropriateness in any situation of any individual license condition is not germane to this regulatory revision.

*Comment #75:* Three commenters requested that BIS exclude controls on operation technology, because it is

already exempt from the ITAR under § 125.4(b)(5).

*Response to Comment #75:* BIS has revised 9E515.a so that it no longer includes controls on technology merely for operation.

*Comment #76:* One commenter requested that, in the event that BIS decides that “operation” data should be controlled under 9E515.a, an exception for basic operations, maintenance, and training information similar to the one provided by § 125.4(b)(5) of the ITAR should be added in a note to the paragraph.

*Response to Comment #76:* BIS has revised 9E515 and .a no longer includes controls on technology for operation. However, when the EAR do control operation technology, License Exception TSU (§ 740.13) provides comparable authority for the export of operation and other basic technology with a legally exported item.

*Comment #77:* One commenter suggested that there is an overlap between the controls on technology for production, which includes the integration stage, and technology for installation and asked if “installation” in this ECCN has the same definition as in the definition of “defense service” proposed in the companion proposed DDTC rule.

*Response to Comment #77:* BIS recognizes that there is some conceptual overlap between the integration stage controlled as production technology and installation technology. There is also conceptual overlap between various stages of development and production technology and certain technology involved in the repair, overhaul, or refurbishing of items. At this time, all controlled technology for 9x515 items has the same level of control, so whether a particular piece of information is required for production or only for installation is academic. As noted above, BIS intends to engage in a review of technology controls and to coordinate with DDTC to harmonize technology controls between the EAR and the ITAR.

*Comment #78:* Three commenters suggested that development and production technology should be in 9E515.a.

*Response to Comment #78:* BIS accepts the change suggested by the commenters, except for development and production technology for radiation-hardened microelectronic circuits controlled in 9A515.d or 9A515.e. Due to the sensitive nature of radiation hardening technology, it was necessary to continue to exclude all technology related to the radiation hardened and radiation tolerant

microelectronic circuits in 9A515.d and .e from STA eligibility, including the technology for the development or production of these items.

*Comment #79:* Three commenters requested that controls on technology for the design verification, quality control and manufacturability be moved to 9E515.a, and not be subject to licensing in the same way as production and development technology.

*Response to Comment #79:* BIS has revised 9E515 to no longer use the terms design verification, quality control and manufacturability. These were undefined terms which may have caused confusion and which became unnecessary once 9E515 was revised.

*Comment #80:* Two commenters suggested that BIS develop a definition for manufacturability to distinguish it from development and production technology, exclude it from the controls on development and production technology in 9A515.a, and retain the control in 9E515.b.

*Response to Comment #80:* BIS has revised 9E515 so that it no longer uses the term “manufacturability” to avoid any confusion.

*Comment #81:* Two commenters suggested that BIS clarify its definition of “build-to-print” technology and some of the elements in Proposed 9E515.b, with which it appears to conflict.

*Response to Comment #81:* BIS has revised 9E515 so that it no longer uses the term build-to-print to enhance clarity and avoid any confusion.

*Comment #82:* One commenter suggested that BIS create a 9E515.y paragraph to control low-level technology.

*Response to Comment #82:* As discussed above in response to comment #63, BIS did accept a comment to create a 9A515.y paragraph for items that are “specially designed” for items in 9A515 or USML Category XV that the U.S. Government determines do not warrant control in 9A515.x. As also discussed above, BIS will continue to review technology controlled by 9E515 to determine whether lower levels of controls on some types of space-related technologies are warranted.

*Comment #83:* Five commenters expressed support for keeping the passenger and participant spaceflight experience EAR99.

*Response to Comment #83:* BIS agrees that export controls on the passenger and participant spaceflight experience are not necessary and has revised the note to 9E515, now Note 2 to 9E515, to clarify the scope of the technology related to the passenger and participant



spaceflight experience, which is not subject to the ITAR or the EAR.

### Comments Related to the International Space Station (ISS)

*Comment #84:* One commenter suggested that BIS delete the Related Control Note 6 in 9A004 and move ISS technology from the USML to 9E001 and 9E002.

*Response to Comment #84:* BIS accepts the change suggested by the commenter and revises all of the Related Control Notes to 9A004 and the text of the List of Items Controlled paragraph. The USML has been revised to exclude the ISS and all specially designed parts and components therefor. See USML Category XV, note to paragraph (a)(12). Therefore, the ISS will remain controlled in 9A004.a and the parts, components, accessories and attachments “specially designed” for the ISS will be controlled in a new 9A004.x. The result of this exclusion on the ITAR is also to remove the technology directly related to the ISS and its specially designed parts and components from the USML to the CCL. The technology controls for 9A004 are 9E001 for development technology and 9E002 for production technology.

*Comment #85:* One commenter suggested that BIS revise 9A004 Related Controls (4) by deleting “and related articles” and “and 9B515.”

*Response to Comment #85:* As discussed above in the response to comment #84, BIS has revised all of the Related Control paragraphs in 9A004, and this comment is no longer relevant.

### Comments Related to Other ECCNs

*Comment #86:* One commenter asked if BIS intends to remove the related controls 3 and 4 from 3A001.

*Response to Comment #86:* BIS did not propose any changes to related controls 3 and 4 in 3A001 and does not make any changes in this rule.

*Comment #87:* One commenter suggested that BIS edit several ECCNs paragraphs in 3A001, 3A002, 3A101, 3D001, 3D101, 3E001, 5A001, 6A002, 7A004, 7A104, 9A004 and 9A116 to identify potential overlaps with the USML or 9A515 and remove references to the USML or 9A515 from the related control paragraphs in those ECCNs.

*Response to Comment #87:* BIS does not accept the changes suggested by the commenter. BIS uses the convention of identifying related controls, including potentially overlapping controls, in the related controls paragraph and not in each ECCN paragraph. The order of review directs parties classifying an item to review USML before reviewing the CCL and to review the 9x515 ECCNs

before reviewing any other ECCNs. Therefore, when the USML describes an item, it is controlled on the USML, and when 9A515 describes an item, it is controlled in 9A515, even if also described in another ECCN.

*Comment #88:* One commenter suggested that BIS revise the MT reason for control paragraph in 3A001 and 9A515.

*Response to Comment #88:* BIS does not accept the change suggested by the commenter. Quoting the MTCR text is more precise.

*Comment #89:* One commenter suggested that BIS revise the List of Items Controlled paragraph in 3A001 and the heading to 3D101.

*Response to Comment #89:* BIS does not accept the change suggested by the commenter because it is outside the scope of the May 24 (spacecraft) rule.

*Comment #90:* One commenter suggested that BIS revised 6A002 by deleting Related Control paragraph (1).

*Response to Comment #90:* BIS does not accept the change suggested by the commenter. In addition to controls in USML Category XV on certain “space-qualified” optics, many of the image intensifiers and focal plane arrays described in Related Control paragraph (1) are controlled in USML Category XII and will be addressed when that paragraph is revised. Additionally, items that are “specially designed” for military use will be controlled on the USML or in the “600 series” in most circumstances.

*Comment #91:* One commenter suggested that BIS delete Related Controls (2) in 6A004.

*Response to Comment #91:* BIS acknowledges the commenter’s support for this proposed revision, which appeared in the May 24 (spacecraft) rule, and has implemented the change in this final rule.

*Comment #92:* One commenter suggested that BIS revise 7A005 by deleting the License Requirements reference that these items are subject to DDTC export licensing authority, and revising the related controls paragraph.

*Response to Comment #92:* BIS does not accept the suggested change by the commenter because it is outside the scope of the May 24 (spacecraft) rule. Major revisions to the controls on GPS will be addressed in the revisions of USML Category XII and the companion EAR “600 series” ECCNs. Additionally, this ECCN is currently subject to the ITAR and is licensed for export by DDTC.

*Comment #93:* One commenter suggested that BIS revise 7A105 to read: “Receiving equipment for Global Navigation Satellite Systems (GNSS)

(e.g., GPS, GLONASS or Galileo), designed or modified for airborne applications and capable of providing navigation information at speeds in excess of 600 m/s (1,165 nautical miles/hour). MT applies to entire entry. MT Column 1. Related Controls: See also USML Category XV(c) and 7A005.” (To conform with MTCR 11.A.3.b.1).

*Response to Comment #93:* BIS accepts the changes suggested by the commenter. Although revisions to USML controls on GPS items will be addressed in revisions of USML Category XII, the revised USML Category XV has removed paragraph XV(c)(2). The GPS described in that paragraph therefore moves to the CCL. Because 7A105 describes the MTCR control on that type of GPS and GPS is not specifically related to spacecraft, it will be controlled in 7A105 and not within 9A515. The text of 7A105 is revised to match the current MTCR text, as accurately described in the comment and to add control for “specially designed” parts and components as well. The reasons for control will be Missile Technology (MT) and Anti-Terrorism (AT) and a license will be required for all destinations other than Canada.

### Export Administration Act

Although the Export Administration Act expired on August 20, 2001, the President, through Executive Order 13222 of August 17, 2001, 3 CFR, 2001 Comp., p. 783 (2002), as amended by Executive Order 13637 of March 8, 2013, 78 FR 16129 (March 13, 2013) and as extended by the Notice of August 8, 2013, 78, 2013, 78 FR 49107 (August 12, 2013), has continued the Export Administration Regulations in effect under the International Emergency Economic Powers Act. BIS continues to carry out the provisions of the Export Administration Act, as appropriate and to the extent permitted by law, pursuant to Executive Order 13222 as amended by Executive Order 13637.

### Rulemaking Requirements

1. Executive Orders 13563 and 12866 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distribute impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This rule has been designated a “significant regulatory



action,” although not economically significant, under section 3(f) of Executive Order 12866. Accordingly, the rule has been reviewed by the Office of Management and Budget (OMB).

2. Notwithstanding any other provision of law, no person is required to respond to, nor is subject to a penalty for failure to comply with, a collection of information, subject to the requirements of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*) (PRA), unless that collection of information displays a currently valid OMB control number. This rule affects two approved collections: Simplified Network Application Processing System (control number 0694–0088), which includes, among other things, license applications, and License Exceptions and Exclusions (0694–0137).

BIS believes that the effect of adding items to the EAR that would be removed from the ITAR as a result of this rule as part of the administration’s Export Control Reform Initiative would increase the number of license applications to be submitted to BIS by approximately 1,500 annually, resulting in an increase in burden hours of 425 (1,500 transactions at 17 minutes each) under control number 0694–0088.

Most “spacecraft” and ground control systems, “space-qualified” “parts,” “components,” “accessories” and “attachments,” and related “software” and “technology” formerly on the USML would become eligible for License Exception STA under this rule. BIS believes that the increased use of License Exception STA resulting from the effect of adding items to the EAR that would be removed from the ITAR as a result of this rule as part of the Administration’s Export Control Reform Initiative would increase the burden associated with control number 0694–0137 by about 2,258 hours (1,935 transactions @ 1 hour and 10 minutes each). BIS expects that this increase in burden would be more than offset by a reduction in burden hours associated with approved collections related to the ITAR. The largest impact of the rule would likely apply to exporters of parts, components, accessories, and attachments specifically designed or modified for satellite and other “spacecraft” items that would have been approved for export under the ITAR pursuant to a license for export to NATO allies and regime partners. Because, with few exceptions, the ITAR allows exemptions from license requirements only for certain exports to Canada, most exports of such parts, even when destined to NATO and other allied countries, require specific State Department authorization. Under the

EAR, as included in this rule, such “parts” and “components” would become eligible for export to countries that are NATO and other multi-regime allies under License Exception STA. Use of License Exception STA imposes a paperwork and compliance burden because, for example, exporters must furnish information about the item being exported to the consignee and obtain from the consignee an acknowledgement and commitment to comply with the EAR. However, the Administration understands that complying with the burdens of STA is likely less burdensome than applying for licenses or other approval from the State Department. For example, under License Exception STA, a single consignee statement can apply to an unlimited number of products, need not have an expiration date, and need not be submitted to the government in advance for approval. Suppliers with regular customers can tailor a single statement and assurance to match their business relationship, rather than applying repeatedly for licenses with every purchase order to supply reliable customers in countries that are close allies or members of export control regimes or both.

Even in situations in which a license would be required under the EAR, the burden is likely to be reduced compared to the license requirement of the ITAR. In particular, license applications for exports of “technology” controlled by 9E515 are likely to be less complex and burdensome than the authorizations required to export ITAR-controlled “technology,” *i.e.*, Manufacturing License Agreements and Technical Assistance Agreements.

3. This rule does not contain policies with Federalism implications as that term is defined under E.O. 13132.

4. The Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 *et seq.*, generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to the notice and comment rulemaking requirements under the Administrative Procedure Act (5 U.S.C. 553) or any other statute, unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Under section 605(b) of the RFA, however, if the head of an agency certifies that a rule will not have a significant impact on a substantial number of small entities, the statute does not require the agency to prepare a regulatory flexibility analysis. Pursuant to section 605(b), the Chief Counsel for Regulation, Department of

Commerce, submitted a memorandum to the Chief Counsel for Advocacy, Small Business Administration, certifying that this rule will not have a significant impact on a substantial number of small entities. A summary of the factual basis for this certification follows.

5. To the extent that any changes to the EAR made by this rulemaking are outside the scope of the logical outgrowth of the changes proposed in the May 24 (spacecraft) rule and the public comments received on that rule, the provisions of the Administrative Procedure Act (5 U.S.C. 553) requiring notice of proposed rulemaking and the opportunity for public comment are waived for good cause as it is contrary to the public interest. (5 U.S.C. 553(b)(B)). BIS implements the new provisions in section paragraph (y) in Supplement No. 2 to Part 748 in this rule to protect U.S. national security or foreign policy interests by preventing the unauthorized export of satellites and unauthorized release of technology related to satellites and launch vehicles. Executive Order 13222 as amended by Executive Order 13637, promulgated, in part, pursuant to § 203 of the International Emergency Economic Powers Act (50 U.S.C. 1702), declares the unrestricted access of foreign parties to U.S. goods and technology to constitute an unusual and extraordinary threat to the national security, foreign policy, and economy of the United States and declares a national emergency with respect to that threat BIS continues to carry out the provisions of the Export Administration Act pursuant to this emergency authority. Additionally, the Congress of the United States has declared that it is in the national security interests of the United States that satellites be subject to the same export controls that apply to munitions. (Section 1511(5) of the 1999 NDAA). Further, Congress has conditioned the removal of satellites from the USML on a determination that the removal of such satellites is in the national security interests of the United States. (Section 1261(b)(1) of the 2013 NDAA). The provisions in paragraph (y) in Supplement No. 2 to Part 748 are implemented to prevent the export of technology related to satellite launches by unauthorized persons. Without this provision, BIS would lack sufficient information to ensure that the exporter has complied with the statutory requirements for the foreign launch of U.S.-origin satellites and related technology that could be released in a manner that is inconsistent with the U.S. national interest. If BIS cannot

confirm that the required approvals from DOD and NSA and that the appropriate monitoring has been arranged, BIS will not be able to ensure that U.S. national security concerns are appropriately addressed in relation to the export. For this reason, BIS finds good cause to waive prior notice and opportunity for public comment.

#### *Number of Small Entities*

BIS does not collect data on the size of entities that apply for and are issued export licenses. Although BIS is unable to estimate the exact number of small entities that would be affected by this rule, it acknowledges that this rule would affect some unknown number.

#### *Economic Impact*

This rule is part of the Administration's Export Control Reform Initiative. Under that initiative, the USML (22 CFR part 121) would be revised to be a "positive" list, *i.e.*, a list that does not use generic, catch-all controls on any part, component, accessory, attachment, or end item that was in any way specifically modified for a defense article, regardless of the article's military or intelligence significance or non-military applications. At the same time, articles that are determined to no longer warrant control on the USML would become controlled on the CCL. "Spacecraft" and related items so designated will be identified in specific ECCNs known as the 9x515 ECCNs. In practice, the greatest impact of this rule on small entities would likely be reduced administrative costs and reduced delay for exports of items that are now on the USML but would become subject to the EAR.

Many "spacecraft" and specific parts and components would remain on the USML. However, "parts," "components," "accessories," and "attachments" for such "equipment" would be included on the CCL unless expressly enumerated on the USML. Such "parts" and "components" are more likely to be produced by small businesses than complete "spacecraft," which would in many cases become subject to the EAR. Moreover, officials at the Department of State have informed BIS that license applications for such "parts" and "components" are a high percentage of the license applications for USML articles reviewed by that department. The changes in this rule will not result in the decontrol of such items, but will reduce administrative and collateral regulatory burdens by, for example, allowing for the use of License Exception STA for

exports to NATO and other multi-regime allied countries.

Thus, changing the jurisdictional status of certain Category XV articles would reduce the burden on small entities (and other entities as well) through: Elimination of some license requirements, greater availability of license exceptions, simplification of license application procedures, and reduction (or elimination) of registration fees. In addition, parts and components controlled under the ITAR remain under ITAR control when incorporated into foreign-made items, regardless of the significance or insignificance of the item, discouraging foreign buyers from incorporating such U.S. content.

Exporters and reexporters of the Category XV articles, particularly "parts" and "components," that would be placed on the CCL by this rule would need fewer licenses because their transactions would become eligible for license exceptions that apply to shipments to United States Government agencies, shipments valued at less than \$1,500, "parts" and "components" being exported for use as replacement parts, temporary exports, and License Exception Strategic Trade Authorization (STA). License Exceptions under the EAR would allow suppliers to send routine parts and low level parts to NATO and other export control regime partner countries without having to obtain export licenses. Under License Exception STA, the exporter would need to furnish information about the item being exported to the consignee and obtain a statement from the consignee that, among other things, would commit the consignee to comply with the EAR and other applicable U.S. laws.

Because such statements and obligations can apply to an unlimited number of transactions and have no expiration date, they would impose a net reduction in burden on transactions that the government routinely approves through the license application process that the License Exception STA statements would replace.

Even for exports and reexports in which a license would be required, the process would be simpler and less costly under the EAR than under the USML. When a USML Category XV article moves to the CCL, the number of destinations for which a license is required would remain unchanged. However, the burden on the license applicant would decrease because the licensing procedure for CCL items is simpler and more flexible than the license procedure for USML articles.

Under the USML licensing procedure, an applicant must include a purchase

order or contract with its application. There is no such requirement under the CCL licensing procedure. This difference gives the CCL applicant at least two advantages. First, the applicant has a way of determining whether the U.S. Government will authorize the transaction before it enters into potentially lengthy, complex, and expensive sales presentations or contract negotiations. Under the USML procedure, the applicant will need to caveat all sales presentations with a reference to the need for government approval, and is more likely to have to engage in substantial effort and expense only to find that the government will reject the application. Second, a CCL license applicant need not limit its application to the quantity or value of one purchase order or contract. It may apply for a license to cover all of its expected exports or reexports to a particular consignee over the life of a license (normally four years, but may be longer if circumstances warrant a longer period), reducing the total number of licenses for which the applicant must apply.

In addition, many applicants, who are exporting or reexporting items that this rule would transfer from the USML to the CCL, would realize cost savings through the elimination of some or all registration fees currently assessed under the USML's licensing procedure. Currently, USML applicants must pay to use the USML licensing procedure even if they never actually are authorized to export. Registration fees for manufacturers and exporters of articles on the USML start at \$2,250 per year, increase to \$2,750 for organizations applying for one to ten licenses per year and further increases to \$2,750 plus \$250 per license application (subject to a maximum of three percent of total application value) for those who need to apply for more than ten licenses per year.

There are no registration costs or application processing fees for applications to export items listed on the CCL. Once the Category XV articles that are the subject of this rulemaking are added to the CCL and removed from the USML, entities currently applying for licenses from the Department of State would find their registration fees reduced if the number of USML licenses those entities need declines. If an entity's entire product line is moved to the CCL, then its ITAR registration and registration fee requirement would be eliminated, and it would no longer incur that expense.

*De minimis* treatment under the EAR would also become available for all items that this rule would transfer from

the USML to the CCL, except for items destined to embargoed destinations in Country Group D:5. Items subject to the ITAR remain subject to the ITAR when they are incorporated abroad into a foreign-made product, regardless of the percentage of U.S. content in that foreign-made product. Foreign-made products that incorporate items that this rule would move to the CCL would be subject to the EAR only if their total controlled U.S.-origin content exceeds 25 percent for most destinations. Because including small amounts of U.S.-origin content would not subject foreign-made products to the EAR, foreign manufacturers would have less incentive to avoid such U.S.-origin "parts" and "components," a development that potentially would mean greater sales for U.S. suppliers, including small entities.

#### Conclusion

BIS is unable to determine the precise number of small entities that would be affected by this rule. Based on the facts and conclusions set forth above, BIS believes that any burdens imposed by this rule would be offset by the reduction in the number of items that would require a license, increased opportunities for use of license exceptions for exports to certain countries, simpler export license applications, reduced or eliminated registration fees and application of a *de minimis* threshold for foreign-made items incorporating U.S.-origin "parts" and "components," which would reduce the incentive for foreign buyers to design out or avoid U.S.-origin content. For these reasons, the Chief Counsel for Regulation of the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration that this rule, if adopted in final form, would not have a significant economic impact on a substantial number of small entities.

BIS did not receive any comments regarding the economic impacts of this rule. As a result, a final regulatory flexibility analysis was not required and one was not prepared.

#### List of Subjects

15 CFR Parts 732, 734, 740, 744, 748 and 758

Administrative practice and procedure, Exports, Reporting and recordkeeping requirements.

15 CFR Parts 736 and 772

Exports.

15 CFR Parts 742 and 774

Exports, Reporting and recordkeeping requirements.

Accordingly, the Export Administration Regulations (15 CFR Parts 730–774) are amended as follows:

#### PART 732—[AMENDED]

■ 1. The authority citation for 15 CFR part 732 continues to read as follows:

**Authority:** 50 U.S.C. app. 2401 *et seq.*; 50 U.S.C. 1701 *et seq.*; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; Notice of August 8, 2013, 78 FR 49107 (August 12, 2013).

■ 2. Supplement No. 3 to part 732 is amended by revising paragraphs (b)13. and (b)14. to read as follows:

#### SUPPLEMENT NO. 3 TO PART 732— BIS'S "KNOW YOUR CUSTOMER" GUIDANCE AND RED FLAGS

\* \* \* \* \*

(b) \* \* \*

13. You receive an order for "parts" or "components" for an end item in 9x515 or the "600 series." The requested "parts" or "components" may be eligible for License Exception STA, another authorization, or may not require a destination-based license requirement for the country in question. However, the requested "parts" or "components" would be sufficient to service one hundred of the 9x515 or "600 series" end items, but you "know" the country does not have those types of end items or only has two of those end items.

14. The customer indicates or the facts pertaining to the proposed export suggest that a 9x515 or "600 series" item may be reexported to a destination listed in Country Group D:5 (see Supplement No. 1 to part 740 of the EAR).

#### PART 734—[AMENDED]

■ 3. The authority citation for 15 CFR part 734 continues to read as follows:

**Authority:** 50 U.S.C. app. 2401 *et seq.*; 50 U.S.C. 1701 *et seq.*; E.O. 12938, 59 FR 59099, 3 CFR, 1994 Comp., p. 950; E.O. 13020, 61 FR 54079, 3 CFR, 1996 Comp., p. 219; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; E.O. 13637 of March 8, 2013, 78 FR 16129 (March 13, 2013); Notice of August 8, 2013, 78 FR 49107 (August 12, 2013); Notice of November 7, 2013, 78 FR 67289 (November 12, 2013).

■ 4. Section 734.4 is amended by revising paragraph (a)(6) to read as follows:

#### § 734.4 De minimis U.S. content.

(a) \* \* \*

(6) "600 series."

(i) There is no *de minimis* level for foreign-made items that incorporate U.S.-origin 9x515 or "600 series" items enumerated or otherwise described in paragraphs .a through .x of a 9x515 or "600 series" ECCN when destined for a country listed in Country Group D:5 of Supplement No. 1 to part 740 of the EAR.

(ii) There is no *de minimis* level for foreign-made items that incorporate U.S.-origin 9x515 or "600 series" .y items when destined for a country listed in Country Group E:1 of Supplement No. 1 to part 740 of the EAR or for the People's Republic of China (PRC).

\* \* \* \* \*

#### PART 736—[AMENDED]

■ 5. The authority citation for 15 CFR part 736 continues to read as follows:

**Authority:** 50 U.S.C. app. 2401 *et seq.*; 50 U.S.C. 1701 *et seq.*; 22 U.S.C. 2151 note; E.O. 12938, 59 FR 59099, 3 CFR, 1994 Comp., p. 950; E.O. 13020, 61 FR 54079, 3 CFR, 1996 Comp., p. 219; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; E.O. 13338, 69 FR 26751, 3 CFR, 2004 Comp., p. 168; Notice of May 7, 2013, 78 FR 27301 (May 9, 2013); Notice of August 8, 2013, 78 FR 49107 (August 12, 2013); Notice of November 7, 2013, 78 FR 67289 (November 12, 2013).

■ 6. Section 736.2 is amended by revising paragraphs (b)(3)(iii) through (v) to read as follows:

#### § 736.2 General prohibitions and determination of applicability.

\* \* \* \* \*

(b) \* \* \*

(3) \* \* \*

(iii) *Additional country scope of prohibition for 9x515 or "600 series" items.* You may not, except as provided in paragraphs (b)(3)(v) or (vi) of this section, reexport or export from abroad without a license any "600 series" item subject to the scope of this General Prohibition Three to a destination in Country Groups D:1, D:3, D:4, D:5 or E:1 (see Supplement No. 1 to part 740 of the EAR). You may not, except as provided in paragraphs (b)(3)(v) or (vi) of this section, reexport or export from abroad without a license any 9x515 item subject to the scope of this General Prohibition Three to a destination in Country Groups D:5 or E:1 (see Supplement No. 1 to part 740 of the EAR).

(iv) *Product scope of 9x515 and "600 series" items subject to this prohibition.* This General Prohibition Three applies if a 9x515 or "600 series" item meets either of the following conditions:

(A) *Conditions defining direct product of "technology" or "software" for 9x515 and "600 series" items.* Foreign-made 9x515 and "600 series" items are subject to this General Prohibition Three if the foreign-made items meet both of the following conditions:

(1) They are the direct product of "technology" or "software" that is in the 9x515 or "600 series" as designated on the applicable ECCN of the

Commerce Control List in Supplement No. 1 to part 774 of the EAR; and

(2) They are in the 9x515 or "600 series" as designated on the applicable ECCN of the Commerce Control List in part 774 of the EAR.

(B) *Conditions defining direct product of a plant for 9x515 and "600 series" items.* Foreign-made 9x515 and "600 series" items are also subject to this General Prohibition Three if they are the direct product of a complete plant or any major component of a plant if both of the following conditions are met:

(1) Such plant or major component is the direct product of 9x515 or "600 series" "technology" as designated on the applicable ECCN of the Commerce Control List in part 774 of the EAR, and

(2) Such foreign-made direct products of the plant or major component are in the 9x515 or "600 series" as designated on the applicable ECCN of the Commerce Control List in part 774 of the EAR.

(v) 9x515 and "600 series" foreign-produced direct products of U.S. "technology" or "software" subject to this General Prohibition Three do not require a license for reexport or export from abroad to the new destination unless the same item, if exported from the U.S. to the new destination would have been prohibited or made subject to a license requirement by part 742, 744, 746, or 764 of the EAR.

\* \* \* \* \*

## PART 740—[AMENDED]

■ 7. The authority citation for 15 CFR part 740 continues to read as follows:

**Authority:** 50 U.S.C. app. 2401 *et seq.*; 50 U.S.C. 1701 *et seq.*; 22 U.S.C. 7201 *et seq.*; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; Notice of August 8, 2013, 78 FR 49107 (August 12, 2013).

■ 8. Section 740.2 is amended by revising paragraph (a)(5)(i), removing and reserving paragraph (a)(7), revising paragraphs (a)(12) introductory text and (a)(12)(i), and adding paragraph (a)(18), effective July 1, 2014, to read as follows:

### § 740.2 Restrictions on all license exceptions.

(a) \* \* \*

(5) \* \* \*

(i) The item is controlled for missile technology (MT) reasons, except that the items described in ECCNs 6A008, 7A001, 7A002, 7A004, 7A101, 7A102, 7A103, 7A104, 7A105, 7B001, 7D001, 7D002, 7D003, 7D101, 7D102, 7E003, 7E101 or 9A515, may be exported as part of a spacecraft, manned aircraft, land vehicle or marine vehicle or in quantities appropriate for replacement

parts for such applications under § 740.9(a)(4) (License Exception TMP for kits consisting of replacement parts), § 740.10 (License Exception RPL), § 740.13 (License Exception TSU), or § 740.15(b) (License Exception AVS for equipment and spare parts for permanent use on a vessel or aircraft).

\* \* \* \* \*

(7) [RESERVED]

\* \* \* \* \*

(12) The item is described in a 9x515 or "600 series" ECCN and is destined to, shipped from, or was manufactured in a destination listed in Country Group D:5 (see Supplement No. 1 to part 740 of the EAR), except that:

(i) 9x515 or "600 series" items destined to, or in, Country Group D:5 are eligible for License Exception GOV (§ 740.11(b)(2) of the EAR); and

\* \* \* \* \*

(18) 9x515 items that are controlled for missile technology (MT) reasons may not be exported, reexported, or transferred (in-country) under License Exception STA (§ 740.20 of the EAR).

\* \* \* \* \*

■ 9. Section 740.9 is amended by revising the last sentence of paragraph (a) introductory text to read as follows:

### § 740.9 Temporary imports, exports, reexports, and transfers (in-country) (TMP).

(a) \* \* \* The references to various countries and country groups in these TMP-specific provisions do not limit or amend the prohibitions in § 740.2 of the EAR on the use of license exceptions generally, such as for exports of 9x515 or "600 series" items to destinations in Country Group D:5.

\* \* \* \* \*

■ 10. Section 740.10 is amended by revising paragraphs (a)(3)(viii), (a)(4)(ii), (b)(1), and (b)(3)(i)(F) to read as follows:

### § 740.10 License Exception Servicing and replacement of parts and equipment (RPL).

\* \* \* \* \*

(a) \* \* \*

(3) \* \* \*

(viii) "Parts," "components," "accessories," and "attachments" classified in 9x515 or "600 series" ECCNs may not be exported or reexported to a destination listed in Country Group D:5 (see Supplement No. 1 to this part).

(4) \* \* \*

(ii) The conditions described in paragraph (a)(3) relating to replacement of "parts," "components," "accessories," or "attachments" (excluding 9x515 and "600 series" ECCNs) do not apply to reexports to a foreign country of "parts," "components," "accessories," or "attachments" as replacements in foreign-origin products, if at the time the replacements are furnished, the foreign-origin product is eligible for export to such country under any of the License Exceptions in this part or the foreign-origin

product is not subject to the EAR pursuant to § 734.4.

\* \* \* \* \*

(b) \* \* \*

(1) Scope. The provisions of this paragraph (b) authorize the export and reexport to any destination, except for 9x515 or "600 series" items to destinations identified in Country Group D:5 (see Supplement No. 1 to this part) or otherwise prohibited under the EAR, of commodities and software that were returned to the United States for servicing and the replacement of defective or unacceptable U.S.-origin commodities and software.

\* \* \* \* \*

(3) \* \* \*

(i) \* \* \*

(F) Commodities or "software" "subject to the EAR" and classified in 9x515 or "600 Series" ECCNs may not be exported or reexported to a destination identified in Country Group D:5 (see Supplement No. 1 to this part).

\* \* \* \* \*

■ 11. Section 740.15 is amended by revising the heading and the introductory text, and adding paragraph (e), to read as follows:

### § 740.15 Aircraft, vessels and spacecraft (AVS).

This License Exception authorizes departure from the United States of foreign registry civil aircraft on temporary sojourn in the United States and of U.S. civil aircraft for temporary sojourn abroad; the export of equipment and spare parts for permanent use on a vessel or aircraft; exports to vessels or planes of U.S. or Canadian registry and U.S. or Canadian Airlines' installations or agents; and the export of spacecraft and components for fundamental research. Generally, no License Exception symbol is necessary for export clearance purposes; however, when necessary, the symbol "AVS" may be used.

\* \* \* \* \*

(e) *Spacecraft for launch.* This paragraph (e) authorizes the export by accredited U.S. institutions of higher learning of commodities subject to the EAR fabricated only for fundamental research purposes when all of the following conditions are met:

(1) The export is to an accredited institution of higher learning, a governmental research center, or an established government funded private research center located in a country other than Country Group D:5 (see Supp. No. 1 to this part) and involves exclusively nationals of such countries;

(2) All the information about the commodity, including its design, and all of the resulting information obtained through fundamental research involving the commodity will be published and shared broadly within the scientific community, and is not restricted for proprietary reasons or specific U.S. government access and dissemination controls or other restrictions accepted by the institution or its researchers on publication of scientific and technical information resulting from the project or activity (see § 734.11 of the EAR); and

(3) If the commodity is for permanent export, the platform or system into which the

commodity will be incorporated must be a scientific, research, or experimental satellite and must be exclusively concerned with fundamental research and may only be launched into space from countries and by nationals of countries not identified in Country Group D:5.

\* \* \* \* \*

■ 12. Section 740.20 is amended by adding a new sentence to the end of paragraph (d)(2) introductory text and revising the heading of paragraph (g) and paragraph (g)(1) to read as follows:

§ 740.20 License Exception Strategic Trade Authorization (STA).

\* \* \* \* \*

(d) \* \* \* (2) \* \* \* Paragraph (vii) is also required for transactions including 9x515 items.

\* \* \* \* \*

(g) License Exception STA eligibility requests for 9x515 and "600 series" end items. (1) Applicability. Any person may request License Exception STA eligibility for end items described in ECCN 0A606.a, ECCN 8A609.a, ECCN 8A620.a or .b, or ECCN 9A610.a or spacecraft described in 9A515.a that provide space-based logistics, assembly or servicing of any spacecraft (e.g., refueling).

PART 742—[AMENDED]

■ 13. The authority citation for 15 CFR part 742 continues to read as follows:

Authority: 50 U.S.C. app. 2401 et seq.; 50 U.S.C. 1701 et seq.; 22 U.S.C. 3201 et seq.; 42 U.S.C. 2139a; 22 U.S.C. 7201 et seq.; 22 U.S.C. 7210; Sec. 1503, Pub. L. 108-11, 117 Stat. 559; E.O. 12058, 43 FR 20947, 3 CFR, 1978 Comp., p. 179; E.O. 12851, 58 FR 33181, 3 CFR, 1993 Comp., p. 608; E.O. 12938, 59 FR 59099, 3 CFR, 1994 Comp., p. 950; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; Presidential Determination 2003-23 of May 7, 2003, 68 FR 26459, May 16, 2003; Notice of August 8, 2013, 78 FR 49107 (August 12, 2013); Notice of November 7, 2013, 78 FR 67289 (November 12, 2013).

■ 14. Section 742.4 is amended by revising paragraph (b)(1)(ii) and adding a new paragraph (b)(1)(iii), to read as follows:

§ 742.4 National security.

\* \* \* \* \*

(b) \* \* \* (1) \* \* \* (ii) When destined to a country listed in Country Group D:5 in Supplement No. 1 to Part 740 of the EAR, however, items classified under 9x515 or "600 series" ECCNs will be reviewed consistent with United States arms embargo policies in § 126.1 of the ITAR.

(iii) When destined to the People's Republic of China or a country listed in Country Group E:1 in Supplement No. 1 to Part 740 of the EAR, items classified under any 9x515 ECCN will be subject to a policy of denial.

\* \* \* \* \*

■ 15. Section 742.6 is amended by revising the first and fourth sentence and adding a new sentence to the end of paragraph (b)(1) to read as follows:

§ 742.6 Regional stability.

\* \* \* \* \*

(b) Licensing policy. (1) Applications for exports and reexports of 9x515 and "600 series" items will be reviewed on a case-by-case basis to determine whether the transaction is contrary to the national security or foreign policy interests of the United States. \* \* \* Applications for export or reexport of items classified under any 9x515 or "600 series" ECCN requiring a license in accordance with paragraph (a)(1) of this section will also be reviewed consistent with United States arms embargo policies in § 126.1 of the ITAR if destined to a country set forth in Country Group D:5 in Supplement No. 1 to part 740 of the EAR. \* \* \* When destined to the People's Republic of China or a country listed in Country Group E:1 in Supplement No. 1 to Part 740 of the EAR, items classified under any 9x515 ECCN will be subject to a policy of denial.

\* \* \* \* \*

PART 744—[AMENDED]

■ 16. The authority citation for 15 CFR part 744 continues to read as follows:

Authority: 50 U.S.C. app. 2401 et seq.; 50 U.S.C. 1701 et seq.; 22 U.S.C. 3201 et seq.; 42 U.S.C. 2139a; 22 U.S.C. 7201 et seq.; 22 U.S.C. 7210; E.O. 12058, 43 FR 20947, 3 CFR, 1978 Comp., p. 179; E.O. 12851, 58 FR 33181, 3 CFR, 1993 Comp., p. 608; E.O. 12938, 59 FR 59099, 3 CFR, 1994 Comp., p. 950; E.O. 12947, 60 FR 5079, 3 CFR, 1995 Comp., p. 356; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13099, 63 FR 45167, 3 CFR, 1998 Comp., p. 208; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; E.O. 13224, 66 FR 49079, 3 CFR, 2001 Comp., p. 786; Notice of January 17, 2013, 78 FR 4303 (January 22, 2013) Notice of August 8, 2013, 78 FR 49107 (August 12, 2013); Notice of September 18, 2013, 78 FR 58151 (September 20, 2013); Notice of November 7, 2013, 78 FR 67289 (November 12, 2013).

■ 17. Section 744.21 is amended by revising paragraph (a)(2) to read as follows:

§ 744.21 Restrictions on certain military end-uses in the People's Republic of China (PRC).

(a) \* \* \* (2) General prohibition. In addition to the license requirements for 9x515 and "600 series" items specified on the Commerce Control List (CCL), you may not export, reexport, or transfer (in-country) any 9x515 or "600 series" item, including items described in a .y paragraph of a 9x515 or "600 series" ECCN, to the PRC without a license.

\* \* \* \* \*

PART 748—[AMENDED]

■ 18. The authority citation for 15 CFR part 748 continues to read as follows:

Authority: 50 U.S.C. app. 2401 et seq.; 50 U.S.C. 1701 et seq.; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; Notice of August 8, 2013, 78 FR 49107 (August 12, 2013).

■ 19. Section 748.8 is amended by revising paragraph (x) and adding paragraph (y) to read as follows:

§ 748.8 Unique application and submission requirements.

\* \* \* \* \*

(x) License application for a transaction involving a 9x515 and "600 series" item that is equivalent to a transaction previously approved under an ITAR license or other approval.

(y) Satellite exports.

■ 20. Supplement No. 1 to part 748 is amended by revising the first and fifth sentences of the final paragraph of Block 24 to read as follows:

Supplement No. 1 to Part 748—Item Appendix, and BIS-748P-B: End-User Appendix; Multipurpose Application Instructions

\* \* \* \* \*

Block 24: Additional Information. \* \* \*

This Block should be completed if your application includes a 9x515 or "600 series" item that is equivalent to a transaction previously approved under an ITAR license or other approval.

\* \* \* The classification of the 9x515 or "600 series" item in question will no longer be the same because the item would no longer be "subject to the ITAR," but all other aspects of the description of the item must be the same in order to be reviewed under this expedited process under paragraph (x) of Supplement No. 2 to part 748 of the EAR.

\* \* \* \* \*

■ 21. Supplement No. 2 to part 748 is amended by revising paragraph (x) and adding paragraph (y) to read as follows:

Supplement No. 2 to Part 748—Unique Application and Submission Requirements

\* \* \* \* \*

(x) License application for a transaction involving a 9x515 or "600 series" item that is equivalent to a transaction previously approved under an ITAR license or other approval. To request that the U.S. Government review of a license application for a 9x515 or "600 series" item also take into consideration a previously approved ITAR license or other approval, applicants must also include the State license number or other approval identifier in Block 24 of the BIS license application (see the instructions in Supplement No. 1 to part 748 under Block 24).

\* \* \* \* \*

(y) *Satellite exports.* (1) A license application to export a satellite controlled by ECCN 9A515.a to a country that is not a member of the North Atlantic Treaty Organization (NATO) or a major non-NATO ally of the United States (as defined in 22 C.F.R. sections 120.31 and 120.32), must include:

(i) A technology transfer control plan approved by the Department of Defense and an encryption technology control plan approved by the National Security Agency, or drafts reflecting advance discussions with the departments and information identifying the U.S. Government officials familiar with the preparation of such draft plans; and

(ii) Evidence of arrangements with the Department of Defense for monitoring of the launch activities.

(2) A license application to export a satellite controlled by ECCN 9A515.a to a country that is a member of the North Atlantic Treaty Organization (NATO) or that is a major non-NATO ally of the United States (as defined in 22 C.F.R. sections 120.31 and 120.32), must include:

(i) A technology transfer control plan approved by the Department of Defense and an encryption technology control plan approved by the National Security Agency, or documentation from the Department of Defense that such plans are not required; and

(ii) Evidence of arrangements with the Department of Defense for monitoring of the launch or documentation from the Department of Defense that such monitoring is not required.

**Note 1 to Paragraph (y):** Regardless of a satellite's or spacecraft's jurisdictional status, ownership, or origin, the ITAR controls as a "defense service" the furnishing of assistance (including training) by a U.S. person to a foreign person directly related to (a) the integration of a satellite or spacecraft to a launch vehicle or (b) launch failure analyses. See (See 22 CFR 121, Categories IV(i) and XV(f), and 22 CFR 124.15).

**PART 758—[AMENDED]**

■ 22. The authority citation for 15 CFR part 758 continues to read as follows:

**Authority:** 50 U.S.C. app. 2401 *et seq.*; 50 U.S.C. 1701 *et seq.*; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; Notice of August 8, 2013, 78 FR 49107 (August 12, 2013).

■ 23. Section 758.1 is amended by revising paragraph (b)(3) to read as follows:

**§ 758.1 The Electronic Export Information (EEI) filing to the Automated Export System (AES).**

\* \* \* \* \*

(b) \* \* \*

(3) For all exports of 9x515 or "600 series" items enumerated in paragraphs .a through .x of a 9x515 or "600 series" ECCN regardless of value or destination, including exports to Canada;

\* \* \* \* \*

■ 24. Section 758.2 is amended by revising paragraph (b)(4) to read as follows:

**§ 758.2 Automated Export System (AES).**

\* \* \* \* \*

(b) \* \* \*

(4) Exports are made under License Exception Strategic Trade Authorization (STA); are made under Authorization Validated End User (VEU); or are of 9x515 or "600 series" items.

■ 25. Section 758.6 is amended by revising paragraph (b) to read as follows:

**§ 758.6 Destination control statement and other information furnished to consignees.**

\* \* \* \* \*

(b) *Additional Requirement for 9x515 and "600 series" items.* In addition to the destination control statement required in paragraph (a), the ECCN for each 9x515 or "600 series" item being exported must be printed on the invoice and on the bill of lading, air waybill, or other export control document that accompanies the shipment from its point of origin in the United States to the ultimate consignee or end user abroad.

**PART 772—[AMENDED]**

■ 26. The authority citation for 15 CFR part 772 continues to read as follows:

**Authority:** 50 U.S.C. app. 2401 *et seq.*; 50 U.S.C. 1701 *et seq.*; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; Notice of August 8, 2013, 78 FR 49107 (August 12, 2013).

■ 27. Section 772.1 is amended by revising the definition for the term "space-qualified" to read as follows:

**§ 772.1 Definitions of terms as used in the Export Administration Regulations (EAR).**

\* \* \* \* \*

"*Space-qualified*". (Cat 3 and 6) Designed, manufactured, or qualified through successful testing, for operation at altitudes greater than 100 km above the surface of the Earth.

**Note 1:** A determination that a specific item is "space-qualified" by virtue of testing does not mean that other items in the same production run or model series are "space-qualified" if not individually tested.

**Note 2:** The terms 'designed' and 'manufactured' in this definition are synonymous with "specially designed." Thus, for example, an item that is "specially designed" for a spacecraft is deemed to be 'designed' or 'manufactured' for operation at altitudes greater than 100 km and an item that is not "specially designed" for a spacecraft is not deemed to have been so 'designed' or 'manufactured.'

\* \* \* \* \*

**PART 774—[AMENDED]**

■ 28. The authority citation for 15 CFR part 774 continues to read as follows:

**Authority:** 50 U.S.C. app. 2401 *et seq.*; 50 U.S.C. 1701 *et seq.*; 10 U.S.C. 7420; 10 U.S.C. 7430(e); 22 U.S.C. 287c, 22 U.S.C. 3201 *et seq.*; 22 U.S.C. 6004; 30 U.S.C. 185(s), 185(u); 42 U.S.C. 2139a; 42 U.S.C. 6212; 43 U.S.C.

1354; 15 U.S.C. 1824a; 50 U.S.C. app. 5; 22 U.S.C. 7201 *et seq.*; 22 U.S.C. 7210; E.O. 13026, 61 FR 58767, 3 CFR, 1996 Comp., p. 228; E.O. 13222, 66 FR 44025, 3 CFR, 2001 Comp., p. 783; Notice of August 8, 2013, 78 FR 49107 (August 12, 2013).

**Supplement No. 1 to Part 774—[Amended]**

■ 29. In Supplement No. 1 to Part 774, Category 1, remove and reserve paragraph .b in the Items paragraph of the List of Items Controlled of Export Control Classification Number (ECCN) 1B018, effective November 10, 2014.

■ 30. In Supplement No. 1 to Part 774, Category 3, revise the MT paragraph of the License Requirements section and the Related Controls paragraphs (1) and (2) and add a new sentence to the beginning of the Related Definitions paragraph of Export Control Classification Number (ECCN) 3A001, effective November 10, 2014, to read as follows:

**Supplement No. 1 to Part 774—The Commerce Control List**

\* \* \* \* \*

**3A001 Electronic "components" and "specially designed" "components" therefor, as follows (see List of Items Controlled).**

**License Requirements**

\* \* \* \* \*

*Country chart (See Supp. No. 1 to part 738)*

Controls(s)	Country chart (See Supp. No. 1 to part 738)
MT applies to 3A001.a.1.a for 'microcircuits' "usable in" "missiles" for protecting "missiles" against nuclear effects (e.g. Electromagnetic Pulse (EMP), X-rays, combined blast and thermal effects) and to 3A001.a.5.a when "designed or modified" for military use, hermetically sealed and rated for operation in the temperature range from below -54 °C to above +125 °C.	MT Column 1

\* \* \* \* \*

**List of Items Controlled**

\* \* \* \* \*

*Related Controls:* (1) See Category XV of the USML for certain "space-qualified" electronics and Category XI of the USML for certain ASICs "subject to the ITAR" (see 22 CFR parts 120 through 130). (2) See

also 3A101, 3A201, 3A991, and 9A515.

\* \* \* \* \*

Related Definitions: 'Microcircuit' means a device in which a number of passive or active elements are considered as indivisibly associated on or within a continuous structure to perform the function of a circuit. \* \* \*

\* \* \* \* \*

■ 31. In Supplement No. 1 to Part 774, Category 3, revise the Related Controls paragraph of Export Control Classification Number (ECCN) 3A002, effective November 10, 2014, to read as follows:

3A002 General purpose electronic equipment and "accessories" therefor, as follows (see List of Items Controlled).

\* \* \* \* \*

List of Items Controlled

Related Controls: See Category XV(e)(9) of the USML for certain "space-qualified" atomic frequency standards "subject to the ITAR" (see 22 CFR parts 120 through 130). See also 3A292, 3A992 and 9A515.x.

\* \* \* \* \*

■ 32. In Supplement No. 1 to Part 774, Category 3, revise the Related Controls paragraph of Export Control Classification Number (ECCN) 3D001, effective November 10, 2014, to read as follows:

3D001 "Software" "specially designed" for the "development" or "production" of "equipment" controlled by 3A001.b to 3A002.g or 3B (except 3B991 and 3B992).

\* \* \* \* \*

List of Items Controlled

Related Controls: "Software" "specially designed" for the "development" or "production" of certain "space-qualified" atomic frequency standards described in Category XV(e)(9) of the USML is "subject to the ITAR" (see 22 CFR parts 120 through 130). See also 3D101 and 9D515.

\* \* \* \* \*

■ 33. In Supplement No. 1 to Part 774, Category 3, revise the License Exception TSR and Related Controls paragraphs of Export Control Classification Number (ECCN) 3E001, effective November 10, 2014, to read as follows:

3E001 "Technology" according to the General Technology Note for the "development" or "production" of "equipment" or "materials" controlled by 3A (except 3A292, 3A980, 3A981, 3A991, 3A992, or 3A999), 3B (except 3B991 or 3B992) or 3C (except 3C992).

\* \* \* \* \*

List Based License Exceptions (See Part 740 for a description of all license exceptions)

\* \* \* \* \*

TSR: Yes, except N/A for MT, and "technology" "specially designed" for the "development" or "production" of: (a)

Traveling Wave Tube Amplifiers described in 3A001.b.8, having operating frequencies exceeding 19 GHz; and (b) solar cells, coverglass-interconnect-cells or covered-interconnect-cells (CIC) "assemblies," solar arrays and/or solar panels described in 3A001.e.4.

\* \* \* \* \*

List of Items Controlled

\* \* \* \* \*

Related Controls: "Technology" according to the General Technology Note for the "development" or "production" of certain "space-qualified" atomic frequency standards described in Category XV(e)(9), MMICs described in Category XV(e)(14), and oscillators described in Category XV(e)(15) of the USML are "subject to the ITAR" (see 22 CFR parts 120 through 130). See also 3E101, 3E201 and 9E515.

\* \* \* \* \*

■ 34. In Supplement No. 1 to Part 774, Category 3, revise the Related Controls paragraph of Export Control Classification Number (ECCN) 3E003, effective November 10, 2014, to read as follows:

3E003 Other "technology" for the "development" or "production" of the following (see List of Items Controlled).

\* \* \* \* \*

List of Items Controlled

Related Controls: See 3E001 for the "development" or "production" related to radiation hardening of integrated circuits, including silicon-on-insulation (SOI) "technology." See also USML Category XI for certain ASICs.

\* \* \* \* \*

■ 35. In Supplement No. 1 to Part 774, Category 5, revise the Related Controls paragraph and remove the second note to Items paragraph (a.3) of Export Control Classification Number (ECCN) 5A001, effective November 10, 2014, to read as follows:

5A001 Telecommunications systems, equipment, "components" and "accessories," as follows (see List of Items Controlled).

\* \* \* \* \*

List of Items Controlled

Related Controls: (1) See USML Category XI for direction-finding "equipment" defined in 5A001.e that is "subject to the ITAR" (see 22 CFR parts 120 through 130). (2) See also 5A101 and 5A991.

\* \* \* \* \*

■ 36. In Supplement No. 1 to Part 774, Category 5, revise the Related Controls paragraph of Export Control Classification Number (ECCN) 5A991, effective November 10, 2014, to read as follows:

5A991 Telecommunication equipment, not controlled by 5A001 (see List of Items Controlled).

\* \* \* \* \*

List of Items Controlled

Related Controls: See also 5E101 and 5E991.

\* \* \* \* \*

■ 37. In Supplement No. 1 to Part 774, Category 5, revise the Related Controls paragraph of Export Control Classification Number (ECCN) 5E001, effective November 10, 2014, to read as follows:

5E001 "Technology" as follows (see List of Items Controlled).

\* \* \* \* \*

List of Items Controlled

Related Controls: See also 5E101, 5E980 and 5E991.

\* \* \* \* \*

■ 38. In Supplement No. 1 to Part 774, Category 6, revise the Related Controls paragraph of Export Control Classification Number (ECCN) 6A002, effective November 10, 2014, to read as follows:

6A002 Optical sensors and equipment, and "components" therefor, as follows (see List of Items Controlled).

\* \* \* \* \*

List of Items Controlled

Related Controls: (1) See USML Categories XII and XV for controls on "image intensifiers" defined in 6A002.a.2 and "focal plane arrays" defined in 6A002.a.3 that are "subject to the ITAR" (see 22 CFR parts 120 through 130). (2) See also 6A102, 6A202, and 6A992.

\* \* \* \* \*

■ 39. In Supplement No. 1 to Part 774, Category 6, revise the Related Controls paragraph of Export Control Classification Number (ECCN) 6A004, effective November 10, 2014, to read as follows:

6A004 Optical equipment, and "components," as follows (see List of Items Controlled).

\* \* \* \* \*

List of Items Controlled

Related Controls: (1) For optical mirrors or 'aspheric optical elements' "specially designed" for lithography "equipment," see ECCN 3B001. (2) See also 6A994.

\* \* \* \* \*

■ 40. In Supplement No. 1 to Part 774, Category 6, revise the Related Controls paragraph of Export Control Classification Number (ECCN) 6D001, effective November 10, 2014, to read as follows:

6D001 "Software" "specially designed" for the "development" or "production" of equipment controlled by 6A004, 6A005, 6A008 or 6B008.

\* \* \* \* \*



**List of Items Controlled**

*Related Controls:* See also 6D991, and ECCN 6E001 (“development”) for “technology” for items controlled under this entry.

\* \* \* \* \*

■ 41. In Supplement No. 1 to Part 774, Category 6, revise the Related Controls paragraph of Export Control Classification Number (ECCN) 6D002, effective November 10, 2014, to read as follows:

**6D002 “Software” “specially designed” for the “use” of equipment controlled by 6A002.b, 6A008 or 6B008.**

\* \* \* \* \*

**List of Items Controlled**

*Related Controls:* “Software” “specially designed” for the “use” of “space-qualified” LIDAR “equipment” “specially designed” for surveying or for meteorological observation, released from control under the note in 6A008.j, is controlled in 6D991. See also 6D102, 6D991, and 6D992.

\* \* \* \* \*

■ 42. In Supplement No. 1 to Part 774, Category 6, revise the Related Controls paragraph of Export Control Classification Number (ECCN) 6E001, effective November 10, 2014, to read as follows:

**6E001 “Technology” according to the General Technology Note for the “development” of equipment, materials or “software” controlled by 6A (except 6A991, 6A992, 6A994, 6A995, 6A996, 6A997, or 6A998), 6B (except 6B995), 6C (except 6C992 or 6C994), or 6D (except 6D991, 6D992, or 6D993).**

\* \* \* \* \*

**List of Items Controlled**

*Related Controls:* See also 6E101, 6E201, and 6E991.

\* \* \* \* \*

■ 43. In Supplement No. 1 to Part 774, Category 6, revise the Related Controls paragraph of Export Control Classification Number (ECCN) 6E002, effective November 10, 2014, to read as follows:

**6E002 “Technology” according to the General Technology Note for the “production” of equipment or materials controlled by 6A (except 6A991, 6A992, 6A994, 6A995, 6A996, 6A997 or 6A998), 6B (except 6B995) or 6C (except 6C992 or 6C994).**

\* \* \* \* \*

**List of Items Controlled**

*Related Controls:* See also 6E992.

\* \* \* \* \*

■ 44. In Supplement No. 1 to Part 774, Category 7, revise the Related Controls paragraph of Export Control Classification Number (ECCN) 7A004, effective November 10, 2014, to read as follows:

**7A004 ‘Star trackers’ and “components” therefor, as follows (see List of Items Controlled).**

\* \* \* \* \*

**List of Items Controlled**

*Related Controls:* (1) See USML Category XV for certain ‘star trackers’ that are “subject to the ITAR” (see 22 CFR parts 120 through 130). (2) See also 7A104 and 7A994.

\* \* \* \* \*

■ 45. In Supplement No. 1 to Part 774, Category 7, revise the Related Controls paragraph of Export Control Classification Number (ECCN) 7A104, effective November 10, 2014, to read as follows:

**7A104 Gyro-astro compasses and other devices, other than those controlled by 7A004, which derive position or orientation by means of automatically tracking celestial bodies or satellites and “specially designed” “parts” and “components” therefor.**

\* \* \* \* \*

**List of Items Controlled**

*Related Controls:* (1) See USML Categories IV and XV for certain ‘star trackers’ that are “subject to the ITAR” (see 22 CFR parts 120 through 130). (2) This entry controls “specially designed” “parts” and “components” for gyro-astro compasses and other devices controlled by 7A004.

\* \* \* \* \*

■ 46. In Supplement No. 1 to Part 774, Category 7, revise Export Control Classification Number (ECCN) 7A105, including the heading, effective November 10, 2014, to read as follows:

**7A105 Receiving equipment for Global Navigation Satellite Systems (GNSS) (e.g., GPS, GLONASS, or Galileo) designed or modified for airborne applications and capable of providing navigation information at speeds in excess of 600 m/s (1,165 nautical mph), and “specially designed” “parts” and “components” therefor.**

**License Requirements**

*Reason for Control:* MT, AT

Control(s)	Country chart
MT applies to entire entry.	MT Column 1
AT applies to entire entry.	AT Column 1

**List Based License Exceptions (See Part 740 for a description of all license exceptions)**

LVS: N/A  
GBS: N/A  
CIV: N/A

**List of Items Controlled**

*Related Controls:* (1) See also 7A005 and 7A994. (2) See Categories XI and XV of the U.S. Munitions List (22 CFR 121.1) for controls on similar

equipment “specially designed” for defense articles.

*Related Definitions:* N/A

*Items:* The list of items controlled is contained in the ECCN heading.

■ 47. In Supplement No. 1 to Part 774, Category 9, revise the List of Items Controlled paragraph of Export Control Classification Number (ECCN) 9A004, effective November 10, 2014, to read as follows:

**9A004 Space launch vehicles and “spacecraft,” as follows (see List of Items Controlled).**

\* \* \* \* \*

**List of Items Controlled**

*Related Controls:* (1) See also 9A104, 9A515, and 9B515. (2) See ECCNs 9E001 (“development”) and 9E002 (“production”) for technology for items controlled by this entry. (3) See USML Categories IV and XV for the space launch vehicles and other spacecraft that are “subject to the ITAR” (see 22 CFR parts 120 through 130).

*Related Definitions:* N/A

*Items:*

a. The International Space Station being developed, launched, and operated under the supervision of the U.S. National Aeronautics and Space Administration.

b. through w. [RESERVED]

x. “Parts,” “components,” “accessories” and “attachments” that are “specially designed” for the International Space Station.

\* \* \* \* \*

■ 48. In Supplement No. 1 to Part 774, between the entries for ECCNs 9A120 and 9A610, add new entry for ECCN 9A515 to read as follows:

**9A515 “Spacecraft” and related commodities, as follows (see List of Items Controlled).**

**License Requirements**

*Reason for Control:* NS, RS, MT, AT

Control(s)	Country chart
NS applies to entire entry, except .e.	NS Column 1
RS applies to entire entry, except .e.	RS Column 1
RS applies to 9A515.e.	RS Column 2
MT applies to 9A515.d when “usable in” “missiles” for protecting “missiles” against nuclear effects (e.g. Electromagnetic Pulse (EMP), X-rays, combined blast and thermal effects).	MT Column 1
AT applies to entire entry.	AT Column 1

**List Based License Exceptions (See Part 740 for a description of all license exceptions)**

LVS: \$1500

GBS: N/A  
CIV: N/A

### Special Conditions for STA

STA: Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any item in 9A515.

### List of Items Controlled

Related Controls: N/A  
Related Definitions: N/A  
Items:

a. [RESERVED]  
b. [RESERVED]  
c. [RESERVED]  
d. Microelectronic circuits (e.g., integrated circuits and micro-circuits) rated, certified, or otherwise specified or described as meeting or exceeding all the following characteristics and that are “specially designed” for defense articles, “600 series” items, or items controlled by 9A515:

d.1. A total dose of  $5 \times 10^5$  Rads (Si) ( $5 \times 10^3$  Gy (Si));

d.2. A dose rate upset threshold of  $5 \times 10^8$  Rads (Si)/sec ( $5 \times 10^6$  Gy (Si)/sec);

d.3. A neutron dose of  $1 \times 10^{14}$  n/cm<sup>2</sup> (1 MeV equivalent);

d.4. An uncorrected single event upset sensitivity of  $1 \times 10^{-10}$  errors/bit/day or less, for the CREME-MC geosynchronous orbit, Solar Minimum Environment for heavy ion flux; and

d.5. An uncorrected single event upset sensitivity of  $1 \times 10^{-3}$  errors/part or less for a fluence of  $1 \times 10^7$  protons/cm<sup>2</sup> for proton energy greater than 50 MeV.

e. Microelectronic circuits (e.g., integrated circuits and micro-circuits) that are rated, certified, or otherwise specified or described as meeting or exceeding all the following characteristics and that are “specially designed” for defense articles controlled by USML Category XV or items controlled by 9A515:

e.1. A total dose  $\geq 1 \times 10^5$  Rads (Si) ( $1 \times 10^3$  Gy(Si)) and  $< 5 \times 10^5$  Rads (Si) ( $5 \times 10^3$  Gy(Si)); and

e.2. A single event effect (SEE) (i.e., single event latchup (SEL), single event burnout (SEB), or single event gate rupture (SEGR)) immunity to a linear energy transfer (LET)  $\geq 80$  MeV-cm<sup>2</sup>/mg.

**Note 1 to 9A515.d and .e:** Application specific integrated circuits (ASICs), integrated circuits developed and produced for a specific application or function, “specially designed” for defense articles are controlled by Category XI(c) of the USML regardless of characteristics.

**Note 2 to 9A515.d and .e:** See 3A001.a for controls on radiation-hardened microelectronic circuits “subject to the EAR” that are not controlled by 9A515.d or 9A515.e.

f. through y. [RESERVED]

■ 49. In Supplement No. 1 to Part 774, Category 9, revise Export Control Classification Number (ECCN) 9A515, effective November 10, 2014, to read as follows:

**9A515 “Spacecraft” and related commodities, as follows (see List of Items Controlled).**

### License Requirements

*Reason for Control:* NS, RS, MT, AT

Control(s)	Country chart
NS applies to entire entry, except .e and .y.	NS Column 1
RS applies to entire entry, except .e and .y.	RS Column 1
RS applies to 9A515.e.	RS Column 2
MT applies to 9A515.d when “usable in” “missiles” for protecting “missiles” against nuclear effects (e.g. Electromagnetic Pulse (EMP), X-rays, combined blast and thermal effects).	MT Column 1
AT applies to entire entry.	AT Column 1

### List Based License Exceptions (See Part 740 for a description of all license exceptions)

LVS: \$1500

GBS: N/A

CIV: N/A

### Special Conditions for STA

STA: (1) Paragraph (c)(1) of License Exception STA (§ 740.20(c)(1) of the EAR) may not be used for “spacecraft” in 9A515.a that provide space-based logistics, assembly or servicing of any spacecraft (e.g., refueling), unless determined by BIS to be eligible for License Exception STA in accordance with § 740.20(g) (License Exception STA eligibility requests for certain “500 series” and “600 series” end items). (2) Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any item in 9A515.

### List of Items Controlled

*Related Controls:* Spacecraft, launch vehicles and related articles that are enumerated in the USML, and technical data (including “software”) directly related thereto, and all services (including training) directly related to the integration of any satellite or spacecraft to a launch vehicle, including both planning and onsite support, or furnishing any assistance (including training) in the launch failure analysis or investigation for items in 9A515.a, are “subject to the ITAR.” All other “spacecraft,” as enumerated below and defined in section 772.1, are subject to the controls of this ECCN. See also ECCNs 3A001, 3A002, 3A991, 3A992, 6A002, 6A004, 6A008, and 6A998 for specific “space-qualified” items, 7A004 and 7A104 for star trackers, and 9A004 for the International Space Station and specially designed part and components therefor. See USML Category XI(c) for controls on microwave monolithic integrated circuits (MMICs) that are “specially designed” for defense articles.

*Related Definitions:* N/A  
Items:

“Spacecraft” and other items described in ECCN 9A515 remain subject to the EAR even if exported, reexported, or transferred (in-country) with defense articles “subject to the ITAR” integrated into and included therein as integral parts of the item. In all other cases, such defense articles are subject to the ITAR. For example, a 9A515.a “spacecraft” remains “subject to the EAR” even when it is exported, reexported, or transferred (in-country) with a “hosted payload” described in USML Category XV(e)(17) incorporated therein. In all other cases, a “hosted payload” performing a function described in USML Category XV(a) always remains a USML item.

a. “Spacecraft,” including satellites, and space vehicles, whether designated developmental, experimental, research or scientific, not enumerated in USML Category XV or described in 9A004.

**Note:** ECCN 9A515.a includes commercial communications satellites, remote sensing satellites not identified in USML Category XV(a), planetary rovers, planetary and interplanetary probes, and in-space habitats.

b. Ground control systems and training simulators “specially designed” for telemetry, tracking, and control of the “spacecraft” controlled in paragraph 9A515.a.

c. [RESERVED]

d. Microelectronic circuits (e.g., integrated circuits and micro-circuits) rated, certified, or otherwise specified or described as meeting or exceeding all the following characteristics and that are “specially designed” for defense articles, “600 series” items, or items controlled by 9A515:

d.1. A total dose of  $5 \times 10^5$  Rads (Si) ( $5 \times 10^3$  Gy (Si));

d.2. A dose rate upset threshold of  $5 \times 10^8$  Rads (Si)/sec ( $5 \times 10^6$  Gy (Si)/sec);

d.3. A neutron dose of  $1 \times 10^{14}$  n/cm<sup>2</sup> (1 MeV equivalent);

d.4. An uncorrected single event upset sensitivity of  $1 \times 10^{-10}$  errors/bit/day or less, for the CREME-MC geosynchronous orbit, Solar Minimum Environment for heavy ion flux; and

d.5. An uncorrected single event upset sensitivity of  $1 \times 10^{-3}$  errors/part or less for a fluence of  $1 \times 10^7$  protons/cm<sup>2</sup> for proton energy greater than 50 MeV.

e. Microelectronic circuits (e.g., integrated circuits and micro-circuits) that are rated, certified, or otherwise specified or described as meeting or exceeding all the following characteristics and that are “specially designed” for defense articles controlled by USML Category XV or items controlled by 9A515:

e.1. A total dose  $\geq 1 \times 10^5$  Rads (Si) ( $1 \times 10^3$  Gy(Si)) and  $< 5 \times 10^5$  Rads (Si) ( $5 \times 10^3$  Gy(Si)); and

e.2. A single event effect (SEE) (i.e., single event latchup (SEL), single event burnout (SEB), or single event gate rupture (SEGR)) immunity to a linear energy transfer (LET)  $\geq 80$  MeV-cm<sup>2</sup>/mg.

**Note 1 to 9A515.d and .e:** Application specific integrated circuits (ASICs), integrated circuits developed and produced for a specific application or function, specifically designed or modified for defense articles and not in normal commercial use

are controlled by Category XI(c) of the USML regardless of characteristics.

Note 2 to 9A515.d and .e: See 3A001.a for controls on radiation-hardened microelectronic circuits "subject to the EAR" that are not controlled by 9A515.d or 9A515.e.

f. through w. [RESERVED]

x. "Parts," "components," "accessories" and "attachments" that are "specially designed" for defense articles controlled by USML Category XV or items controlled by 9A515, and that are NOT:

1. Enumerated or controlled in the USML or elsewhere within ECCN 9A515;
2. Microelectronic circuits;
3. Described in 7A004 or 7A104; or
4. Described in an ECCN containing "space-qualified" as a control criterion (i.e., 3A001.b.1, 3A001.e.4, 3A002.a.3, 3A002.g.1, 3A991.o, 3A992.b.3, 6A002.a.1, 6A002.b.2, 6A002.d.1, 6A004.c and .d, 6A008.j.1, or 6A998.b).

**Note to 9A515.x:** "Parts," "components," "accessories," and "attachments" specified in USML subcategory XV(e) or enumerated in other USML categories are subject to the controls of that paragraph or category.

y. Items that would otherwise be within the scope of ECCN 9A515.x but that have been identified in an interagency-cleared commodity classification (CCATS) pursuant to § 748.3(e) as warranting control in 9A515.y.

■ 50. In Supplement No. 1 to Part 774, between the entries for ECCNs 9B117 and 9B610, add new entry for ECCN 9B515, effective November 10, 2014, to read as follows:

**9B515 Test, inspection, and production "equipment" "specially designed" for "spacecraft" and related commodities, as follows (see List of Items Controlled). License Requirements**

*Reason for Control:* NS, RS, AT

Control(s)	Country chart
NS applies to entire entry.	NS Column 1
RS applies to entire entry.	RS Column 1
AT applies to entire entry.	AT Column 1

**List Based License Exceptions (See Part 740 for a description of all license exceptions)**

*LVS:* \$1500; \$5000 for 9B515.b

*GBS:* N/A

*CIV:* N/A

**Special Conditions for STA**

*STA:* Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any item in 9B515.

**List of Items Controlled**

*Related Controls:* N/A

*Related Definitions:* N/A

Items:

- a. Test, inspection, and production "equipment" "specially designed" for the "production" or "development" of commodities enumerated in ECCN 9A515.a, or USML Category XV(a) or XV(e).

*Note: ECCN 9B515.a includes equipment, cells, and stands "specially designed" for the analysis or isolation of faults in commodities enumerated in ECCN 9A515.a or USML Category XV(a) or XV(e).*

b. Environmental test chambers capable of pressures below  $(10^{-4})$  Torr, and "specially designed" for commodities enumerated in 9A515.a or USML Category XV(a).

■ 51. In Supplement No. 1 to Part 774, between the entries for ECCNs 9D105 and 9D610, add a new entry for ECCN 9D515 to read as follows:

**9D515 "Software" "specially designed" for the "development," "production" operation, installation, maintenance, repair, overhaul, or refurbishing of "spacecraft" and related commodities, as follows (see List of Items Controlled).**

**License Requirements**

*Reason for Control:* NS, RS, AT

Control(s)	Country chart
NS applies to entire entry.	NS Column 1
RS applies to entire entry.	RS Column 1
AT applies to entire entry.	AT Column 1

**List Based License Exceptions (See Part 740 for a description of all license exceptions)**

*CIV:* N/A

*TSR:* N/A

**Special Conditions for STA**

*STA:* (1) Paragraph (c)(1) of License Exception STA (§ 740.20(c)(1) of the EAR) may not be used for 9D515.d or .e (2) Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any "software" in 9D515.

**List of Items Controlled**

*Related Controls:* "Software" directly related to articles enumerated in USML Category XV is subject to the control of USML paragraph XV(f).

*Related Definitions:* N/A

Items:

- a. [RESERVED]
- b. [RESERVED]
- c. [RESERVED]
- d. "Software" "specially designed" for the "development," "production," operation, failure analysis or anomaly resolution of commodities controlled by ECCN 9A515.d.
- e. "Software" "specially designed" for the "development," "production," operation, failure analysis or anomaly resolution of commodities controlled by ECCN 9A515.e.

■ 52. In Supplement No. 1 to Part 774, revise Export Control Classification Number (ECCN) 9D515, effective November 10, 2014, to read as follows:

**9D515 "Software" "specially designed" for the "development," "production," operation, installation, maintenance, repair, overhaul, or refurbishing of "spacecraft" and related commodities, as follows (see List of Items Controlled).**

**License Requirements**

*Reason for Control:* NS, RS, AT

Control(s)	Country chart
NS applies to entire entry.	NS Column 1
RS applies to entire entry.	RS Column 1
AT applies to entire entry.	AT Column 1

**List Based License Exceptions (See Part 740 for a description of all license exceptions)**

*CIV:* N/A

*TSR:* N/A

**Special Conditions for STA**

*STA:* (1) Paragraph (c)(1) of License Exception STA (§ 740.20(c)(1) of the EAR) may not be used for 9D515.b, .d, or .e. (2) Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any "software" in 9D515.

**List of Items Controlled**

*Related Controls:* "Software" directly related to articles enumerated in USML Category XV is subject to the control of USML paragraph XV(f). See also ECCNs 3D001, 6D001, 6D002, and 6D991 for controls of specific software "specially designed" for certain "space-qualified" items.

*Related Definitions:* N/A

Items:

- a. "Software" (other than "software" controlled in paragraphs .b, .d, or .e of this entry) "specially designed" for the "development," "production," operation, installation, maintenance, repair, overhaul, or refurbishing of commodities controlled by ECCN 9A515 (except 9A515.d or .e) or 9B515.
- b. "Source code" that:
  - b.1. Contains the algorithms or control principles (e.g., for clock management), precise orbit determination (e.g., for ephemeris or pseudo range analysis), signal construct (e.g., pseudo-random noise (PRN) anti-spoofing) "specially designed" for items controlled by ECCN 9A515;
  - b.2. Is "specially designed" for the integration, operation, or control of items controlled by ECCN 9A515;
  - b.3. Contains algorithms or modules "specially designed" for system, subsystem, component, part, or accessory calibration, manipulation, or control of items controlled by ECCN 9A515;
  - b.4. Is "specially designed" for data assemblage, extrapolation, or manipulation of items controlled by ECCN 9A515;
  - b.5. Contains the algorithms or control laws "specially designed" for attitude, position, or flight control of items controlled in ECCN 9A515; or
  - b.6. Is "specially designed" for built-in test and diagnostics for items controlled by ECCN 9A515.
- c. [RESERVED]
- d. "Software" "specially designed" for the "development," "production," operation, failure analysis or anomaly resolution of commodities controlled by ECCN 9A515.d.
- e. "Software" "specially designed" for the "development," "production," operation,

failure analysis or anomaly resolution of commodities controlled by ECCN 9A515.e.

■ 53. In Supplement No. 1 to Part 774, between the entries for ECCNs 9E102 and 9E610, add new entry for ECCN 9E515 to read as follows:

**9E515 “Technology” “required” for the “development,” “production,” operation, installation, repair, overhaul, or refurbishing of “spacecraft” and related commodities, as follows (see List of Items Controlled).**

#### License Requirements

*Reason for Control:* NS, MT, RS, AT

<i>Control(s)</i>	<i>Country chart</i>
NS applies to entire entry.	NS Column 1
MT applies to technology for items in 9A515.d controlled for MT reasons.	MT Column 1
RS applies to entire entry.	RS Column 1
AT applies to entire entry.	AT Column 1

#### List Based License Exceptions (See Part 740 for a description of all license exceptions)

*CIV:* N/A

*TSR:* N/A

#### Special Conditions for STA

*STA:* (1) Paragraph (c)(1) of License Exception STA (§ 740.20(c)(1) of the EAR) may not be used for 9E515.d or .e. (2) Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any “technology” in 9E515.

#### List of Items Controlled

*Related Controls:* Technical data directly related to articles enumerated in USML Category XV are subject to the control of USML paragraph XV(f).

*Related Definitions:* N/A

Items:

- [RESERVED]
- [RESERVED]
- [RESERVED]
- “Technology” “required” for the “development,” “production,” operation, failure analysis or anomaly resolution of commodities controlled by ECCN 9A515.d.
- “Technology” “required” for the “development,” “production,” failure analysis or anomaly resolution of commodities controlled by ECCN 9A515.e.

■ 54. In Supplement No. 1 to Part 774, revise Export Control Classification Number (ECCN) 9E515, effective November 10, 2014, to read as follows:

**9E515 “Technology” “required” for the “development,” “production,” operation, installation, repair, overhaul, or refurbishing of “spacecraft” and related commodities, as follows (see List of Items Controlled).**

#### License Requirements

*Reason for Control:* NS, MT, RS, AT

<i>Control(s)</i>	<i>Country chart</i>
NS applies to entire entry.	NS Column 1
MT applies to technology for items in 9A515.d controlled for MT reasons.	MT Column 1
RS applies to entire entry.	RS Column 1
AT applies to entire entry.	AT Column 1

#### License Exceptions

*CIV:* N/A

*TSR:* N/A

#### Special Conditions for STA

*STA:* (1) Paragraph (c)(1) of License Exception STA (§ 740.20(c)(1) of the EAR) may not be used for 9E515.b, .d or .e. (2) Paragraph (c)(2) of License Exception STA (§ 740.20(c)(2) of the EAR) may not be used for any “technology” in 9E515.

#### List of Items Controlled

*Related Controls:* Technical data directly related to articles enumerated in USML Category XV are subject to the control of USML paragraph XV(f). See also ECCNs 3E001, 3E003, 6E001, and 6E002 for specific “space-qualified” items. See 9E001 and 9E002 for technology for the International Space Station and “parts,” “components,” “accessories,” and “attachments” “specially designed” therefor. See USML category XV(f) for controls on technical data and defense services related to launch vehicle integration.

*Related Definitions:* N/A

Items:

- “Technology” “required” for the “development,” “production,” installation, repair (including on-orbit anomaly resolution and analysis beyond established procedures), overhaul or refurbishing of commodities controlled by ECCN 9A515 (except 9A515.b, .d, or .e), 9B515, or “software” controlled by 9D515.a.
- “Technology” “required” for the “development,” “production,” failure analysis or anomaly resolution of software controlled by ECCN 9D515.b.
- [RESERVED]
- “Technology” “required” for the “development,” “production,” operation, failure analysis or anomaly resolution of commodities controlled by ECCN 9A515.d.
- “Technology” “required” for the “development,” “production,” failure analysis or anomaly resolution of commodities controlled by ECCN 9A515.e.

**Note 1:** [RESERVED]

**Note 2:** *Activities and technology/technical data directly related to or required for the*

*spaceflight (e.g., sub-orbital, orbital, lunar, interplanetary, or otherwise beyond Earth orbit) passenger or participant experience, regardless of whether the passenger or participant experience is for space tourism, scientific or commercial research, commercial manufacturing/production activities, educational, media, or commercial transportation purposes, are not subject to the ITAR or the EAR. Such activities and technology/technical data include those directly related to or required for:*

- “spacecraft” access, ingress, and egress, including the operation of all “spacecraft” doors, hatches, and airlocks;
- physiological training (e.g., human-rated centrifuge training or parabolic flights, pressure suit or spacesuit training/operation);
- medical evaluation or assessment of the spaceflight passenger or participant;
- training for and operation by the passenger or participant of health and safety related hardware (e.g., seating, environmental control and life support, hygiene facilities, food preparation, exercise equipment, fire suppression, communications equipment, safety-related clothing or headgear) or emergency procedures;
- viewing of the interior and exterior of the spacecraft or terrestrial mock-ups;
- observing “spacecraft” operations (e.g., pre-flight checks, landing, in-flight status);
- training in “spacecraft” or terrestrial mock-ups for connecting to or operating passenger or participant equipment used for purposes other than operating the “spacecraft”; or
- donning, wearing or utilizing the passenger’s or participant’s flight suit, pressure suit or spacesuit, and personal equipment.

**Note 3 to 9E515:** *Neither USML Category XV(f) nor ECCN 9E515 control the data transmitted to or from a satellite or “spacecraft,” whether real or simulated, when limited to information about the health, operational status, or measurements or function of, or raw sensor output from, the “spacecraft,” “spacecraft” payload(s), or its associated subsystems or components. Such information is not within the scope of information captured within the definition of “technology” in the EAR. Examples of such information, which are commonly referred to as “housekeeping data,” include (i) system, hardware, component configuration, and operation status information pertaining to temperatures, pressures, power, currents, voltages, and battery charges; (ii) “spacecraft” or payload orientation or position information, such as state vector or ephemeris information; (iii) payload raw mission or science output, such as images, spectra, particle measurements, or field measurements; (iv) command responses; (v) accurate timing information; and (vi) link budget data. The act of processing such telemetry data—i.e., converting raw data into engineering units or readable products—or encrypting it does not, in and of itself, cause the telemetry data to become subject to the ITAR or to ECCN 9E515. All classified technical data directly related to items controlled in USML Category XV or ECCNs 9A515, and defense services using the*

*classified technical data remains subject to the ITAR. This note does not affect controls in USML VX(f), ECCN 9D515, or ECCN 9E515 on software source code or commands that control a "spacecraft," payload, or associated subsystems.*

■ 55. In Supplement No. 4 to Part 774, revise paragraph (a)(3), the introductory text of paragraph (a)(4), and the first sentence of paragraph (a)(5), to read as follows:

**Supplement No. 4 to Part 774—  
Commerce Control List Order of Review**

(a) \* \* \*

(3) Step 3. The "600 series" describes military items that were once subject to the ITAR. The 9x515 ECCNs describe "spacecraft," related items, and some radiation-hardened microelectronic circuits

that were once subject to the ITAR under USML Category XV. Just as the ITAR effectively trumps the EAR, items described in a 9x515 ECCN or "600 series" ECCN trump other ECCNs on the CCL. Thus, the next step in conducting a classification analysis of an item "subject to the EAR" is to determine whether it is described in a 9x515 ECCN or "600 series" ECCN paragraph other than a "catch-all" paragraph such as a ".x" paragraph that controls unspecified "parts" and "components" "specially designed" for items in that ECCN or the corresponding USML paragraph. If so, the item is classified under that 9x515 ECCN or "600 series" ECCN paragraph even if it would also be described in another ECCN.

(4) Step 4. If the item is not described in a 9x515 ECCN or "600 series" ECCN, then determine whether the item is classified under a 9x515 ECCN or "600 series" catch-all paragraph, i.e., one that controls non-

specific "parts," "components," "accessories," and "attachments" "specially designed" for items in that ECCN or the corresponding USML paragraph. Such items are generally in the ".x" paragraph of ECCN 9A515 or a "600 series" ECCN. \* \* \*

(5) Step 5. If an item is not classified by a "600 series" or in a 9x515 ECCN, then starting from the beginning of the product group analyze each ECCN to determine whether any other ECCN in that product group describes the item. \* \* \*

\* \* \* \* \*

Dated: May 7, 2014.

**Kevin J. Wolf,**

*Assistant Secretary of Commerce for Export Administration.*

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**BILLING CODE 3510-33-P**