July 27, 2012

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Subject: Specially Designed Definition - ITAR RIN 1400-AD22
Specially Designed Definition - EAR RIN 0694-AF66

The June 19, 2012 proposed definition of "specially designed" would defeat the objective of the Export Control Reform to reduce incentives for foreign manufacturers to design out U.S.-origin content. It would vastly increase the scope of controls on specially designed components currently on the CCL. This would constitute an incentive for foreign manufacturers to design out EAR as well as ITAR components. This result could be avoided by not using "specially designed" in the "600 series." The term would then not have to be defined as part of the Export Control Reform and there would be no adverse impact on components in the existing CCL.

The Commerce June 19 "specially designed" definition proposed rule states at the bottom of page 36409 and the top of page 36410 that all references to "specially designed" cannot immediately be removed from the CCL for two reasons:

1. Replacing the term with specific items that warrant control would take many years; and
2. The new "600 series" must use a catch-all "specially designed" term to avoid decontrolling items now ITAR-controlled.

With respect to the first reason, while replacing "specially designed" with specific technically defined items is the optimal solution, that is not the only means to remove that term from control lists. It took only a few weeks to prepare the attached ~~line-out~~ line-in revisions to the existing CCL and so-far published proposals for "600 series" and USML Categories V, VI, VII, VIII, IX, X, XIII, XIX, and XX. These indicate how "specially designed," and many other similarly ambiguous phrases, could be completely eliminated from both the CCL and the USML without making any technical changes.

With respect to the second reason, construing "specially designed" to be catch-all is inconsistent with the only export control purpose of "specially designed." That is to distinguish between what is controlled and what is not controlled. Catch-all means there is nothing modified by "specially designed" which would not be controlled. Therefore, the catch-all interpretation removes "specially designed" from relevance to the problem of how to avoid decontrolling items now ITAR-controlled.

Before adopting the June 19 definition, or any alternative, something like the attached detail must be set forth in another proposed rule to show exactly what the effects would be. Most of the suggestions in the attached detail, including hundreds of deletions, would be non-controversial.

Before adopting any increase in National Security controls beyond Wassenaar agreements, such as numerous existing CCL component controls, a proposal to that effect would have to be at least submitted to Wassenaar to comply with EAA Section 5(c)(6). Preferably, U.S. adoption should await successful completion of negotiations in Wassenaar.

Delays associated with Wassenaar proposals or negotiations could be avoided by simply removing "specially designed" from "600 series" descriptions. But construing everything transferred as catch-all is inconsistent with the end-item portion of the proposed "specially designed" definition and with the carve-outs in the components portion.

It is suggested that the proposed (a)(1) definition of "specially designed" for end-items be revised by using "required" rather than "specially designed" and revising the definition of "required" to include commodities as well as technology. The EAR definition of "required" already differs from the Wassenaar definition by including software. So adding commodities to the EAR definition would simply expand the U.S. unilateral element. At this time, the commodities element would be applied only to "600 series" end-items. It is also suggested that ", as a result of development," be removed from proposed (a) introductory wording. The word "design" appears several times in the definition of "development." Therefore, as a result of development would bring into play designer intent. The Administration has made clear that it wishes to avoid a designer intent criterion. Moreover, the development limitation would exclude end-items as well as components with specified characteristics as a result of "production." Such an exclusion is broader than the (b)(3)(ii) portion of the carve-out for components in "production" (*i.e.*, not in "development"). It is probably also broader than intended for end-items.

The carve-outs could be transformed into "600 series" Technical Notes. Such Notes should not use the words "specially designed." This is because the carve-outs are not dependent upon the special intentions of the designer. This approach would leave for another day whether, and if so how, to define "specially designed" as those words are used in the existing CCL. This would avoid expanding controls on components now on the CCL.

Attachments:

1. Analysis of nine objectives of the proposed definition of "specially designed."
2. "Specially designed" history
3. Criteria for deciding whether to delete "specially designed" or to replace it with other non-technical wording
4. Statistical Summary of 2,112 ~~line-out~~ <u>line-in</u> changes in existing CCL and so-far published "600 series" and USML revisions
5. ~~Line-out~~ <u>line-in</u> changes in each of the ten CCL categories (including so-far published proposed "600 series") and in so-far published proposed USML revisions (in separate documents)

Attachment 1

Analysis of Nine Objectives for a Definition of "Specially Designed"

1. **Preclude multiple or overlapping controls of similar items within and across the two control lists**

The distinction between end-items and components in the June 19 proposed definition of "specially designed" makes it impossible to achieve this objective. There are many examples of controlled items which are both end-items and components. A major example is aero gas turbine engines. They are components of aircraft but also end-items with respect to their own components. They thus constitute "overlapping controls of similar items within and across the two control lists." It may, in theory, be possible to have two sets of "specially designed" controls for aero gas turbine engines, one for end-items and one for components. However, this would be confusing and would still not achieve objective #1.

In addition, proposed 9A619.a military gas turbine engines specially designed for a military use not controlled by XIX.a, b, or d overlaps proposed XIX.c engines specially designed for military UAVs. Proposed XIX.a, b, and .c cover various types of engines whether in development, production or inventory. Part (a) of the new proposed definition of "specially designed" is limited to "as a result of development," thus excluding "production" or inventory. Therefore, in these instances, the definition of "specially designed" appears to have caused the overlap, rather than precluding it.

To overcome the XIX.a, b, c overlap problem, it would be necessary to delete "as a result of development" from the introductory paragraph in part (a) of the definition of "specially designed." Also see comment re objective #2 for other reasons to delete "as a result of development."

2. **Be easily understood and applied by exporters, prosecutors, juries, and the U.S. Government, *e.g.*, by using objective, knowable, and clear requirements that do not rely upon a need to investigate and divine the intentions of the original designer of a part or the predominant market applications for such items.**

The introduction to part (a) of the proposed definition of "specially designed" includes:

as a result of "development."

The definition of "development" includes the word "design" eight times. To determine whether the characteristics in a.1, a.2, or a.3 are a result of "development," an exporter would have to "investigate and divine the intentions of the original designer" in these many respects.

The remedy for this problem would be to delete as a result of "development" from part (a).

This would also close an unintended loophole. The "as a result of development" limitation in (a) means that all USML and all CCL items having a.1, a.2, or a.3 characteristics as a result of

production, rather than as a result of development, are uncontrolled. The clear intent of the b.3 carve-out is to remove from control for this reason only components of EAR99 and AT-only items which might also be used in other controlled items.

Based on dictionary definitions, the prosecutors, the main witness for the prosecution, the jury, and the Appeals Court in the FMI case interpreted "specially designed" to mean designer intent. The State Department repeatedly does so in proposed rules. The one dated June 19, 2012, states:

> Although one of the goals of the ECR initiative is to describe USML controls without using design intent criteria, a few of the controls in the proposed revision nonetheless use the term "specially designed."

A more logical conclusion would be to determine that it is necessary to delete "specially designed" and, where applicable, replace it either with a list of specific items or with another general term not susceptible to a designer intent interpretation.

The Commerce June 19 "specially designed" definition proposed rule states at the bottom of page 36409 and the top of page 36410 that all references to "specially designed" cannot immediately be removed from the CCL for two reasons:

1. Replacing the term with specific items that warrant control would take many years; and
2. The new "600 series" must use a catch-all "specially designed" term to avoid decontrolling items now ITAR-controlled.

With respect to the first reason, the Commerce June 19 Advanced Notice of Proposed Rule Making on the Feasibility of Enumerating "Specially Designed" Components makes a commendable start in doing precisely this. Moreover, for some end items, there may be no components warranting control. For items requiring years of deliberation to determine which components warrant control, "required" could replace "specially designed."

With respect to the second reason, interpretations that ITAR controls on components "specifically designed or modified" for end-items described in that Category are "catch all" mean that the ITAR equivalent of "specially designed" when describing controlled components has no meaning whatever. The only export control purpose of "specially designed" is to distinguish between what is controlled and what is not controlled. Catch-all means there are no components not controlled. Therefore, "specially designed" is in no way related to the problem of how to avoid inadvertent decontrol of components moved from the USML to the CCL.

It might be argued that State Department concurrence in the June 19 proposed definition of "specially designed" indicates that it does not, now, interpret the ITAR equivalent of "specially designed" components to be a catch-all because of the part (b) carve-outs. However, parts a.2 and a.3 literally catch-all; b.1 and b.3 carve-outs exclude what is enumerated on the USML; the b.2 carve-out addresses parts and not components; and documentary and other limitations on b.4 and b.5 carve-outs might effectively remove their applicability to the USML.

There are at least three means of avoiding decontrolling components now ITAR-controlled without using the irrelevant term "specially designed":

1. Simply remove “specially designed” from ECCNs YA6zz.x;
2. Same as 1 plus the carve-outs in Technical Notes rather than in a “specially designed” definition; or
3. Substitute “required” in those ECCNs for applicability to individual components but impose a new control on all components when accompanied by technology to assemble them into the controlled USML or “600 series” end-item.

At a recent TransTAC meeting, State and Commerce representatives agreed that existing ITAR Category VIII(b) covers all gas turbine engines used in aircraft controlled by VIII(a). This catch-all interpretation makes the words “specifically designed or modified” in VIII(b) meaningless. However, part a.1 of the “specially designed” definition is not a catch-all formulation. Therefore, if these engines are construed to be end-items, as in proposed new Category XIX, the June 19 definition of “specially designed” would not accomplish the second Commerce reason for not removing “specially designed” from the CCL, namely:

> The new “600 series” must use a catch-all “specially designed” term to avoid decontrolling items now ITAR-controlled.

The December 6, 2011, proposed 9A619.a reads:

> “Military gas turbine engines” “specially designed” for a military use that are not controlled in USML Category XIX, paragraphs (a), (b), or (d).

The Note to 9A619.a defines “military gas turbine engines” to be “specially designed” for “end-items” enumerated elsewhere. Therefore, the a.2 catch-all is incorporated in that expression. However, “specially designed” in “specially designed for a military use” limits 9A619.a coverage to the a.1 portion of the definition, which is not a catch-all.

The aircraft engine portion of the remedy for this failure for the 600 series to control items now ITAR-controlled would be to change “specially designed for a military use” to “for aircraft controlled by Category VIII.a or ECCN 9A610.a.” This would require changing “Aero-engines specially designed or modified for military use” in Wassenaar Munitions List 10.d to “, not certified by the civil aviation authority in a Wassenaar member country, used in aircraft controlled by 10.a.”

Both the State and Commerce proposed rules include:

> Paragraph (b) codifies the principle in ITAR 120.3 that, in general, a commodity should not be ITAR controlled if it has a predominant civil application ...

It is not apparent how paragraph (b) would do this. But this interpretation of paragraph (b) is inconsistent with objective #2.

The catch-all plus carve-outs construct of the definition is not “easily understood and applied.” In the 1960s, Commerce controlled all industrial equipment and all chemicals with listed carve-out exceptions. It proved impossible to include all equipment and chemicals on these negative lists for which there was no basis for control.

3. **Be consistent with definitions used by the multilateral export control regimes.**

The MTCR definition and the similar unique interpretation of “specially designed” which the

United States Delegate formally presented to COCOM in 1975 are much narrower than all parts of the June 19 proposed definition. Objective #3 cannot be achieved without successfully completing negotiations in multilateral regimes, including MTCR as well as Wassenaar, NSG, and Australia Group. This would be more difficult to accomplish if a more restrictive definition became effective in U.S. regulations prior to commencement of multilateral negotiations.

The exclusion of MT items from the ANPRM request for feasibility of enumerating "specially designed" components implies a stark deviation from the overall goal of a common definition of "specially designed" for use in the EAR and ITAR.

4. **Not include any item specifically enumerated on either the USML or the CCL and, in order to avoid a definitional loop, do not use "specially designed" as a control criterion.**

Using "specially designed" as a catch-all control criterion is the ultimate of a definitional loop. The sole purpose of "specially designed" as a means to distinguish what is controlled from what is not controlled is antithetical to any catch-all concept.

5. **Be capable of excluding from control simple or multi-use parts such as springs, bolts, and rivets, and other types of items the U.S. Government determines do not warrant significant export controls**

Proposed rules so far published have not excluded from control items which the U.S. Government determines do not warrant significant export controls.

6. **Apply to both descriptions of end items that are "specially designed" to have particular characteristics and to parts and components that were "specially designed" for particular end items.**

The proposed definition does not apply to "both" such end-items and such parts and components. On the contrary the application to end-items differs markedly from the application to parts and components.

7. **Apply to materials and software because they are "specially designed" to have a particular characteristic or for a particular type of end item**

Generally, controlled materials may be adequately defined technically, without using "specially designed" or any similar modifier. When a material is fabricated to the extent of being identified as a component, it should be controlled as a component rather than as a material.

The words "specially designed" are seldom used to describe software . Instead, the USML uses "directly related" and the CCL and Wassenaar use "specially designed or modified." These are among the expressions similar to "specially designed" which should be deleted and, where applicable, be replaced with "required."

8. **Not increase the current control level to "600 series" control or other higher end controls of items (*i.e.*, not move items currently subject to a lower control status to a higher level control status) particularly current EAR99 items, which are now controlled at lower levels**

Replacing 60 years of the unique interpretation of "specially designed" for CCL components with
catch-all less modest carve-outs would move countless thousands of current EAR99 items to a higher level control status.

9. **Not, merely as a result of the definition, cause historically EAR-controlled items to become ITAR controlled**

Some aero gas turbine engines and components thereof incorporating 9E003.a, h, or i technologies, which are now literally controlled by 9A001 or 9A003, would be controlled by Category XIX. The clearest example is XIX.f.2 hot section components "specially designed" for gas turbine engines controlled by this category. The catch-all feature of the June 19 "specially designed" definition for components is a major contributor to this movement of "historically EAR-controlled items to become ITAR controlled."

CCL ECCNs 1A101, 1C001, 1C101, 6B008, and 6B108 now cover all MTCR Item 17 equipment and materials and 1D103, 1E001, 1E101, 6E001, 6E002, and 6E101 now cover all MTCR Item 17 software and technology items. Proposed USML XIII.g and XIII.i, using different parameters, including multiple uses of "specially designed," are marked "MT" to indicate that they cover MTCR Item 17.

Attachment 2

Specially Designed History

1951 Administrative Principle 4 (AP4): COCOM agreement not to defeat the purpose of the embargo of end-items by permitting uncontrolled export of specialized components. Shortly thereafter, "specialized" was changed to "specially designed"

1950-1965 EAR "unique" definition of "specially fabricated"

1965 EAR substitution of "specially designed" for "specially fabricated" in a rule stating that the changed terminology makes no substantive change.

1975 US Delegate to COCOM records in a COCOM document a "unique" interpretation of "specially designed".

1979 EAA amended to restrict unilateral National Security controls

1981 COCOM adopts definition of "required" for controlled technology on a finding that the "unique" interpretation of "specially designed" is insufficiently restrictive
COCOM adopts International Munitions List control on technology for assembly of components into production installations for items on Munitions List even if the components of such production installations are not controlled. See WML22.b.1. Shortly thereafter UK Government survives a no-confidence motion by one vote in connection with Matrix Churchill case involving export of a munitions production plant to Iraq without a license because none of the components required a license.

c. 1990 MTCR adopts "unique" definition of "specially designed"

1995 FMI and Lachman were found guilty in District Court based on jury instructions that "specially designed" meant designer intent plus capable of.

1999 UK Wassenaar proposal: "Specially designed" originally developed exclusively for the purpose specified in the relevant entry regardless of other uses found subsequently. If original purpose not known, current use exclusively or predominantly for that purpose."Specially designed for military use" originally developed exclusively for military use, regardless of any subsequent non-military use or intended use after export. Lengthy special rules for non-lethal goods, products from a commercial production line to meet military standards, or incorporating items specially designed for military use.

2000 Commerce (Tanya Mottley) formally requests industry views on meaning of "specially designed." Unanimous industry response was "unique." MPETAC determined that, in many instances, "specially designed" could simply be deleted.

2001 Russian proposal: as a result of development, suitable exclusively or predominantly for

achieving definite purpose specified in the relevant entry. Not have any other function or application, or the achievement of this purpose is its predominant function or use.

2003 District Court judge reverses FMI/Lachman guilty verdict, because "specially designed" was void for vagueness.

2005 Appeals Court reimposes guilty verdict in FMI/Lachman case.
Commerce issues a ten year denial order, even though Commerce had still not determined that a license was required.

Attachment 3

Criteria re What, if Any, Words to Replace "Specially Designed" and Related Expressions

Commodities

End-items:

"Specially designed" may simply be deleted (or, optionally, be replaced by "rated") if the end-item is otherwise adequately technically described. If not, "required" should be used, consistent with paragraph (a)(1) of the June 19, 2012 proposed definition of "specially designed." If the end-item is limited only by "specially designed for military use," substitution of "required" for "specially designed" does not solve the problem. Almost anything may be used by or for the military. In those cases, DDTC should try again to come up with better definitions.

Information security commodities and software as described in USML XIII(b) are now covered by ECCNs 5A002 and 5D002.

Parts

What follows assumes that the June 19 (b)(2) carve-out removes all "parts" from control. The proposed rule includes an example of a part which would be excluded from control even though modified for a controlled item. No example of a controlled part is given.

Components

Simple deletion of "specially designed" when modifying USML or "600 series" CCL ECCNs components (or other expressions equivalent to components) assumes a continued control of all such components.

However, components on the current CCL would be limited by "required." The stated reasons for not eliminating "specially designed" are:

1. Replacing the term with specific items that warrant control would take many years; and
2. The new "600 series" must use a catch-all "specially designed" term to avoid decontrolling items now ITAR-controlled.

Neither of these reasons apply to substituting "required" for "specially designed" for components

on the current CCL. The definition of "required" tracks closely the COCOM Administrative Principle 4 basis for the first use of "specially designed" in control lists. AP4 provided that only those components should be controlled which would defeat the purpose of the embargo of the equipment containing them.

Accessories and Attachments

The 121.8.c definition of "accessories and attachments" includes "not necessary for (end-item or system) operation" and gives examples which are separately controlled (riflescopes and special paints). Therefore, the following deletes from the USML "accessories and attachments" not further identified; but includes in "600 series" ECCNs accessories and attachments not controlled by the USML, with no "specially designed" or other qualifier.

However, the "enhance their ... effectiveness" portion of the definition of "accessories and attachments" makes the AP4 reason for using the modifier "required" applicable for current CCL ECCNs.

Technical Data, Technology, and Software

Each USML Category controls technical data directly related to the defense articles enumerated in that Category. "Technical data" is defined to include software as well as technology. "Directly related to" is not defined.

What follows assumes that:

1. Directly related in the USML should be replaced with "required."

   This is for consistency with the Wassenaar use of "required" for technology, the EAR inclusion of software in its definition of "required", and part (a)(1) of the June 19, 2012, definition of "specially designed." Part (a)(1) uses terminology from the definition of "required." Software and technology must fall under (a)(1), because they are not (a)(2) or (a)(3) (not being parts, components, accessories, or attachments).

2. For current CCL software ECCNs, "specially designed or modified," or similar expressions, should be replaced with "required."

   This is for consistency with the EAR inclusion of software in its definition of "required", and part (a)(1) of the June 19, 2012, definition of "specially designed." Part (a)(1) uses terminology from the definition of "required." Software must fall under (a)(1), because it is not (a)(2) or (a)(3) (not being parts, components, accessories, or attachments)

3. Jurisdiction for development and production software and technology accompanies jurisdiction for equipment for development or production of USML-controlled items.

   With the puzzling exception of Category XX, in the proposed rules so far published, such equipment is Commerce jurisdiction in ECCNs YB6zz.

4. Software and technology for operation, installation, maintenance, repair, overhaul, or refurbishing of USML-controlled items should be on the USML.

5. Wassenaar Munitions List technology item 22.b.1 re production installations with no controlled components should be included in each ECCN YE6zz.
6. WML 22.b.2 technology to produce reproductions of antique small arms should be included in ECCN 0E601.
7. Jurisdiction for WML 22.b.3 and 4 technology for development, production, or use of WML 7 controlled items would be covered by points 2 and 3 above. Jurisdiction for WML 22.b.5 technology for incorporation of biocatalysts into military carrier substances should be the same agency which controls the biocatalysts. Hopefully that will be clarified when the Category XIV proposed rule is published.
8. WML 21.b.1,2,3 software for simulating weapon systems, simulating military operational scenarios, or determining the effects of weapons should be controlled in USML Category XIII.
9. WML 21.b.4 software for C^3I military use should be controlled in 5D611.
10. WML 21.c software to enable uncontrolled equipment to perform the functions of WML-controlled equipment should be in ECCNs YD6zz.for functions of USML or "600 series" equipment.

Classified Regulations controlling classified information are more restrictive and more effective than export controls can be.

DOD Contract DOD contractual terms, which may be more or less restrictive than export controls, should govern

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Attachment 4

July 18, 2012

Recapitulation of Recommended Specially Designed Revisions for All CCL ECCNs

The most significant recommendation in these comments is to delete all use of "specially designed" in both the EAR/CCL and ITAR/USML. This is because the substantially catch-all proposed definition for components cannot reasonably apply to components on the existing CCL. The hundreds of thousands of new CCL controlled components would expand the "ITAR free" mentality of foreign manufacturers to an "ITAR + EAR free" mentality.

There are 702 uses of "specially designed" in the existing CCL plus "600 series" ECCNs and USML revisions so far publicly proposed. Each one of these (plus more in "600 series" and USML proposals not yet published) must be analyzed to determine what, if anything, should replace "specially designed." There are also 1,410 similar expressions raising similar issues.

The attached documents ~~line-out~~ each of the 2,112 uses of "specially designed" and similar expressions and substitute the meaningful discriminating term of "required" for only 741 (35% of the total). Of the remainder, 483 recommend the optional catch-all term "rated," 244 recommend "other" non-definitive expressions, such as "as defined in the USML," and 644

recommend simple deletion. These deletions would apply to current catch-all usage in the USML. Deletions also include CCL items with sufficient technical descriptions which appear to permit omission of inherently ambiguous nexus terminology, such as "specially designed" or "required." Of the 702 uses of "specially designed," only half (358) would be replaced with "required." Ideally, uses of "required" would eventually disappear as adequate technical descriptions were developed. However, that would take many years to accomplish. By contrast, the recommendations in these documents would not be unduly time-consuming. "Required" is already an accepted term for technology. It would be much easier to negotiate in multilateral regimes than the component portion of the June 19 proposed definition of "specially designed."

This would involve revising the definition of "required" in the EAR, as follows:

> "Required" (General Technology Note) (Cat 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9) As applied to "technology" or "software" or commodity, refers to only that portion of "technology" or "software" or commodity which is peculiarly responsible for achieving or exceeding the controlled performance levels, characteristics, or functions. ...

The 24 recommended "required" substitutions on the USML are for proposed items not yet adequately defined technically, such as "specially designed" for military use. Hopefully, these proposals will be further revised technically to permit no use of "required" on the USML.

There follows a statistical summary categorizing the 2,112 recommended changes. The + sign refers to instances where "specially designed" is coupled with another term, such as "specially designed or modified" or "specially designed or prepared." "Other components" means items not referred to as "components" but which are stated to be contained in other items.

Statistical Summary of Suggested ~~Line-Out~~ Line-In Changes

	Specially Designed		Specially Designed +		Other		Totals		
	CCL	ML	CCL	ML	CCL	ML	CCL	ML	Grand
Controlled Item									
Changed to "required"	235	1	87		210	13	532	24	556
Changed to rated	24		15		333	9	372	9	381
Changed to other	15		49		143	3	207	3	210
Deleted	132	7	14		196	11	342	18	360
"Components"									
Changed to "required"	97		10		26		133		133
Changed to rated					2		2		2
Changed to other			4		7		11		11
Deleted	60	26	1		16	1	77	27	104
Other components									
Changed to "required"	12				33		45		45
Changed to rated					6		6		6
Changed to other	4		4		7		15		15
Deleted	5	20	2		65	46	72	66	138
Decontrolled items									
Changed to "required"	3				4		7		7
Changed to rated	45		2		47		94		94
Changed to other					8		8		8
Deleted	6		2		34		42		42
Totals									
Changed to "required"	347	11	97		273	13	717	24	741
Changed to rated	69		17		388	9	474	9	483
Changed to other	19		57		165	3	241	3	244
Deleted	203	53	19		311	58	533	111	644
Grand Total	638	64	190		1,137	83	1,965	147	2,112

July 14, 2012

Specially Designed Issues CCL Category 0

These revisions assume that the EAR definition of "required" is expanded to cover commodities.

0A001
... components ~~specially designed or prepared~~ as defined by NRC for ...

0A002 .. equipment ~~specially designed~~ as defined in the USML

0A606.a
Ground vehicles, whether manned or unmanned, ~~"specially designed" for a military use and~~ not enumerated in USML Category VII , as follows:

a ~~Note: For purposes of paragraph .a, "ground vehicles" include~~
- (i) Tanks and armored vehicles manufactured prior to 1956 that do not contain a functional weapon or a weapon capable of becoming functional through repair;
- (ii) Armored military railway trains except those that are armed or ~~are "specially designed" to~~ that launch missiles;
- (iii) unarmored, unarmed ~~military recovery and other support~~ vehicles~~; (iv) unarmored, unarmed vehicles~~ with mounts or hard points for firearms of .50 caliber or less; and
- (iv) trailers ~~"specially designed"~~ "required" for use with other ground vehicles enumerated in USML Category VII or ECCN 0A606.a~~, and not separately enumerated in USML Category VII~~.

b.1 Note 2: ECCN 0A606.b.1 does not control civilian vehicles ~~"specially designed"~~ for transporting money or valuables.
Note 3: "Unarmed" means not having installed weapons, installed mountings for weapons, or ~~special~~ reinforcements for mounts for weapons.

e Deep water fording kits ~~"specially designed"~~ "required" for ground vehicles controlled by ECCN 0A606.a or USML Category VII.

f Self-launching bridge components not enumerated in USML Category VII(g) ~~"specially designed"~~ "required" for deployment by ground vehicles enumerated in USML Category VII or this ECCN.

x Option I
~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" for a commodity enumerated in this ECCN (other than 0A606.b,c,d,e,f) or for a defense article enumerated in USML Category VII and not elsewhere specified on the USML or the CCL
Option II
~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" for a commodity enumerated in this ECCN (other than 0A606.b,c,d,e,f) or for a defense article enumerated in USML Category VII except (b-3,4,5 carve-outs) and not elsewhere specified on the USML or the CCL

Option III

~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" "required" for a commodity enumerated in ECCN 0A606 (other than 0A606.b,c,d,e,f) or for a defense article enumerated in USML Category VII and not elsewhere specified on the USML or the CCL and all "parts," "components," "accessories," or "attachments" for a commodity enumerated in ECCN 0A606 (other than 0A606.b,c,d,e,f) or for a defense article enumerated in USML Category VII accompanied by technology to assemble them into such a commodity or such an article

y Specific ~~"parts," "components," "accessories," and "attachments" "specially designed" for a commodity enumerated in ECCN 0A606 (other than 0A606.b) or a defense article in USML Category VII and~~ commodities not elsewhere specified on the USML or the CCL, as follows:

0A614

a "Equipment" ~~"specially designed"~~ for military training that is not enumerated in USML Category IX , Category VIII.a.3, or ECCNs 0A617.d, 9A610.a, or 9A991.a.2, as follows: ~~Note: This entry includes~~ operational flight trainers, radar target trainers, flight simulators for aircraft classified under ECCN 9A610.a, human-rated centrifuges, radar trainers for radars classified under ECCN3A611, instrumented flight trainers for military aircraft navigation trainers for military items, target equipment, armament trainers, military pilotless aircraft trainers, mobile training units and training equipment for ground military operations.

Note: This entry does not apply to "equipment" ~~"specially designed"~~ for training in the use of hunting or sporting weapons.

x Option I

~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" for a commodity controlled by this entry or an article enumerated in USML Category IX and not elsewhere specified on the USML or the CCL

Option II

~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" for a commodity controlled by this entry or an article enumerated in USML Category IX except (b-3,4,5 carve-outs) and not elsewhere specified on the USML or the CCL

Option III

~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" "required" for a commodity controlled by this entry or an article enumerated in USML Category IX and not elsewhere specified on the USML or the CCL and all "parts," "components," "accessories," or "attachments" for a commodity controlled by this entry or an article enumerated in USML Category IX accompanied by technology to assemble them into such a commodity or such an article

y Specific ~~"parts," "components," "accessories," and "attachments" "specially designed"~~

~~for a commodity subject to control in this ECCN and~~ not elsewhere specified in the USML or CCL, as follows:

0A617

Related Controls: ... (5) "Libraries," i.e., parametric technical databases, ~~"specially designed"~~ for ~~military use with~~ equipment controlled by USML or a "600 series" ECCN are controlled by the technical data and technology controls pertaining to such items. (6) For controls on nuclear power generating equipment or propulsion equipment~~, including "nuclear reactors," "specially designed" for military use, and parts~~ and components ~~"specially designed" therefor~~, see USML Categories ~~VI, XIII, XV, and XX~~ VI.e and XX.b and ECCN 2A290. (7) Simulators ~~"specially designed"~~ for ~~military~~ "nuclear reactors" are controlled by ~~USML Category IX(b)~~ ECCN 2A291.b. (8) Laser protection equipment ... ~~"specially designed" for military use are~~ is subject to the controls of USML Category X(a)(7) or Category XIII.j.1. (9) "Fuel cells" ~~"specially designed" for a defense article not on the USML or a commodity controlled by a "600 series" ECCN are controlled according to the corresponding "600 series" ECCN for such end-items. (10) See~~ are controlled by USML Category XV and ECCNs 9A515, 3A001.e.1, and 8A002.j.3 ~~for controls on fuel cells specially designed for satellite or spacecraft~~.

a Construction equipment ~~"specially designed"~~ "required" for military use, including such equipment ~~"specially designed"~~ "required" for transport in aircraft controlled by USML VIII.a or ECCN 9A610,a; and ~~"parts,"~~ "components" and "accessories and attachments" ~~"specially designed"~~ "required" therefor, including crew protection kits used as protective cabs.

b Concealment and deception ~~equipment "specially designed"~~ "required" for military application, including special paints, decoys, smoke or obscuration equipment and simulators, and ~~"parts,"~~ "components," "accessories," and "attachments" ~~"specially designed"~~ therefor, not controlled by USML Category XIII, 1C001 or 1C101.

c Ferries, bridges (other than those described in ECCN 0A606 or USML Category VI), and pontoons ~~"specially designed"~~ "required" for military use.

d Test models, not controlled by USML Category IX, ~~"specially designed"~~ "required" for the "development" of defense articles controlled by the USML or commodities controlled by a "600 series" ECCN.

e Photointerpretation, stereoscopic plotting and photogrammetry equipment ~~"specially designed"~~ "required" for military use and ~~"parts,"~~ "components~~,~~" ~~"accessories and attachments" "specially designed"~~ therefor

y.1 Containers ~~"specially designed"~~ "required" for defense articles or items controlled by a "600 series" ECCN.

y,2 Field generators ~~"specially designed"~~ "required" for military use.

y.3 Power controlled searchlights and control units therefor, ~~"specially designed"~~ "required" for military use, and "equipment" mounting such units; and ~~"parts,"~~ "components" and "accessories and attachments" ~~"specially designed"~~ "required" therefor.

0A979

... and ~~parts n.e.s~~. components "required" therefor

0A981
Equipment ~~designed~~ for the execution of human beings, as follows
c Air tight vaults ~~designed~~ for the execution of human beings ...

0A982
... ~~parts and accessories n.e.s.~~ components "required" therefor

0A983
~~Specially designed~~ implements ~~of~~ "required" for torture ...~~parts and accessories n.e.s.~~ components "required" therefor

0A984
... except equipment ~~used exclusively~~ rated to treat ... and except arms ~~designed solely~~ rated for signal ...

(Neither the exporter nor the Government can know that an item is used exclusively or designed solely for a stated purpose. The manufacturer's rating should be adequate evidence of meeting criteria for exceptions from control.)

0A985
... except equipment ~~used exclusively~~ rated to treat ... and except arms ~~designed solely~~ rated for signal ...

0A986
Shotgun shells ... and ~~parts~~ components "required" therefor

0A987
Optical sighting devices for firearms ... and ~~parts~~ components "required" therefor
f Laser pointing devices ~~designed~~ for ~~use on~~ firearms

0A999
~~Specific~~ processing equipment, as follows
AT applies ... The Commerce Country Chart ~~is not designed to~~ does not determine AT license requirements for this entry.

0B001
Plant ... and ~~specially designed or prepared~~ equipment and components as defined by NRC
a Plant ~~specially designed~~ as defined by NRC for ...
b Equipment and components, ~~specially designed or prepared~~ as defined by NRC
c Equipment and components, ~~specially designed or prepared~~ as defined by NRC
d Equipment and components, ~~specially designed or prepared~~ as defined by NRC
e Equipment and components, ~~specially designed or prepared~~ as defined by NRC
f Equipment and components, ~~specially designed or prepared~~ as defined by NRC
g Equipment and components, ~~specially designed or prepared~~ as defined by NRC
h Equipment and components, ~~specially designed or prepared~~ as defined by NRC

i Equipment and components, ~~specially designed or prepared~~ as defined by NRC
j Equipment and components, ~~specially designed or prepared~~ as defined by NRC

0B002
~~Specially designed or prepared~~ auxiliary systems, equipment and components as defined by NRC
e ...systems ~~specially designed~~ as defined by NRC
f ... mass spectrometers/ion sources ~~specially designed or prepared~~ as defined by NRC...

0B003
Plant... and equipment ~~specially designed or prepared~~ as defined by NRC ...

0B004
Plant ... and ~~specially designed or prepared~~ equipment and components as defined by NRC

0B005
Plant ~~specially designed~~ for fabrication ... and ~~specially designed~~ equipment as defined by NRC

0B006
Plant for ... and ~~specially designed or prepared~~ equipment and components as defined by NRC
b ... ~~specially designed or prepared~~ as defined by NRC ... ~~are capable of withstanding~~ withstand ... ...
c ... ~~specially designed or prepared~~ as defined by NRC
d ... ~~specially designed or prepared~~ as defined by NRC
e ... ~~specially designed~~ as defined by NRC

0B606
Test, inspection, and other production "equipment" and ~~related commodities~~ components, ~~not enumerated on the USML, "specially designed" for the "development " or "production" of commodities enumerated in ECCN 0A606 or USML Category VII (See List of Items Controlled)~~ as follows:
a Test, inspection, and other production "equipment" ~~"specially designed"~~ "required" for the "development " or "production" of commodities enumerated in ECCN 0A606 (except for 0A606.y) or in USML Category VII, and ~~"parts,"~~ "components~~,~~" ~~"accessories and attachments" "specially designed"~~ "required" therefor.
b Environmental test facilities ~~"specially designed"~~ "required" for the certification, qualification, or testing of commodities enumerated in ECCN 0A606 (except for 0A606.b,c,d,e,f or 0A606.y) or in USML Category VII, and "equipment" ~~"specially designed"~~ "required" therefor
y Specific test, inspection, and production "equipment" ~~"specially designed"~~ "required" for the "development " or "production" of commodities enumerated in ECCN 0A606 (except for 0A606.y) or in USML Category VII, and ~~"parts,"~~ "components~~,~~" ~~"accessories and attachments" "specially designed"~~ "required" therefor, as follows:

0B614

Test, inspection, and other production "equipment" for military training "equipment" and ~~"specially designed"~~ ~~"parts,"~~ "components~~,~~" ~~"accessories and attachments"~~therefor, as follows (see List of Items Controlled).

a Test, inspection, and other production "equipment"~~ "specially designed"~~ "required" for the "development " or "production" of commodities controlled by ECCN 0A614 or enumerated in USML Category IX.

b ~~[Reserved]~~ Environmental test facilities "required" for the certification, qualification, or testing of commodities enumerated in ECCN 0A614 (except for 0A614.y) or in USML Category IX, and "equipment" "required" therefor

x ~~"Parts,"~~ "components~~,~~" ~~"accessories and attachments" that are "specially designed"~~ "required" for a commodity controlled by ECCN 0B614.

y Specific ~~"parts,"~~ "components~~,~~" ~~"accessories and attachments" "specially designed"~~ "required" for a commodity subject to control in this ECCN and not elsewhere specified in the CCL, as follows:

0B617

Test, inspection, and other production "equipment and ~~related commodities~~ components ~~"specially designed" for the "development " or "production" of commodities controlled by ECCN 0A617.a or USML Category XIII~~, as follows

a Test, inspection, and other production "equipment" not controlled by USML Category XIII(k) ~~"specially designed"~~ "required" for the "development" or "production" of commodities controlled by ECCN 0A617 or in USML Category XIII, and ~~"parts,"~~ "components~~,~~" ~~"accessories and attachments" "specially designed"~~ "required" therefor.

b ~~[Reserved]~~ Environmental test facilities "required" for the certification, qualification, or testing of commodities enumerated in ECCN 0A617 or in USML Category XIII, and "equipment" "required" therefor

Note to 0B617:

Field engineer equipment ~~"specially designed"~~ "required" for use in a combat zone, identified in WAML Category 17.d and mobile repair shops ~~"specially designed" or modified~~ "required" to service military equipment, identified in WAML Category 17.j are controlled by 0B617 to the extent that the items are not included in USML Category XIII.k.

0B986

Equipment ~~specially designed~~ "required" for

0B999

~~Specific~~ processing equipment, as follows

AT applies ... The Commerce Country Chart ~~is not designed to~~ does not determine AT license requirements for this entry.

RS applies ... The Commerce Country Chart ~~is not designed to~~ does not determine RS license requirements for this entry.

0C201

~~Specially prepared~~ compounds or powders, as defined by the NRC, ...

0C606
Materials ~~"specially designed"~~ for ~~commodities controlled by ECCN 0A606~~ military ground vehicles not elsewhere specified in the USML or the CCL, as follows (see List of Items Controlled)
Related Controls: ~~(1) Materials specifically designed, modified, adapted, or configured for military vehicles and related articles controlled in USML Category VII are controlled in USML paragraph XIII(f).~~

(The only materials covered in the May 18, 2012 proposal for Category XIII(f) are classified. Classification regulations are more effective than export controls to restrict classified materials.)

a. Materials ~~"specially designed"~~ "required" for ~~the "development" or "production" of~~ commodities enumerated in ECCN 0A606 (other than 0A606.b or 0A606.y) or USML Category VII, not elsewhere specified in the USML or the CCL
Note 2: Materials "~~specially designed"~~ for both ground vehicles enumerated in USMLCategory VII and ground vehicles enumerated in ECCN 0A606 are subject to the controls of this ECCN ~~unless identified in USML CategoryVII(g) as being subject to the controls of that paragraph~~.

(No part of the December 6, 2011, proposed Category VII covers any materials.)

y Specific materials ~~"specially designed"~~ "required" for ~~the "production" or "development" of~~ commodities enumerated in ECCN 0A606 (except for 0A606.y) or USML Category VII, as follows:

0C617
Miscellaneous materials ~~"specially designed"~~ for military use, not controlled by 1C001 or 1C101, as follows (see List of Items Controlled)
Unit ~~End items in number; parts, component, accessories and attachments in~~ $ value
Related Controls: ~~For controls on other signature suppression materials, see USML Category XIII and ECCNs 1C001 and 1C101.~~ N/A

(The only materials in the May 18, 2012 proposal for Category XIII are classified.)

a Materials, coatings and treatments "required" for signature suppression~~, "specially designed"~~ for military use ~~and that are not controlled by USML Category XIII or ECCNs 1C001 or 1C101~~

0C999
~~Specific~~ processing equipment, as follows
AT applies ... The Commerce Country Chart ~~is not designed to~~ does not determine AT license requirements for this entry.
RS applies ... The Commerce Country Chart ~~is not designed to~~ does not determine RS license requirements for this entry.

0D001
... ~~specially designed or modified~~ as defined by NRC or as defined in the USML

0D606

”Software” ~~“specially designed” for the “development,” “production,” operation or maintenance of ground vehicles and related commodities controlled by 0A606, 0B606, or 0C606~~, as follows,

Related Controls: Software ~~directly related to~~ “required” for installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Category VII ~~are~~ is subject to the controls of USML paragraph VII(h)

a ”Software” ~~“specially designed”~~ “required” for the “development,” “production,” operation, installation, maintenance, repair, overhaul, or refurbishing ~~or maintenance~~ of commodities or software controlled by 0A606 (except for 0A606.b,c,d,e,f or 0A606.y), 0B606 (except 0B606.y), or 0D606 (except 0D606.y) or “software” “required” for the “development” or “production” of USML Category VII

b ~~[Reserved]~~ “Software,” not controlled by the USML or 0D606.a, “required” for “equipment” not controlled by the USML or 0A606 to perform the functions specified in USML Category VII

y Specific ”software” ~~“specially designed” for the “development,” “production,” operation or maintenance of commodities enumerated in 0A606~~ , as follows:

y.1 Specific “software” ~~“specially designed”~~ “required” for the “development,” “production,” operation, installation, maintenance, repair, overhaul, or refurbishing ~~or maintenance~~ of commodities or software enumerated in ~~9A610.y,, 9B610.y, or 9C610.y~~ 0A606.y, 0B606.y, or 0D606.y

0D614

Related Controls: Software ~~directly related to~~ “required” for installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Category IX ~~are~~ is subject to the controls of USML paragraph IX(e)

a ”Software” (other than “software” controlled in paragraph .y of this entry) ~~“specially designed”~~ “required” for the “development,” “production,” operation, installation, maintenance, repair, overhaul, or refurbishing ~~or maintenance~~ of commodities or software controlled by 0A614 (except 0A614.y), ~~or~~ 0B614 (except 0B614.y), or 0D614 (except 0D614.y) or “software” for the “development” or “production” of USML Category IX

b ~~[Reserved]~~ “Software,” not controlled by the USML or 0D614.a, “required” for “equipment” not controlled by the USML or 0A614 to perform the functions specified in USML Category IX

y Specific ”software” ~~“specially designed” for the “development,” “production,” operation or maintenance of commodities controlled by 0A614.y, or 0B614.y~~, as follows:

y.1 Specific “software” ~~“specially designed”~~ “required” for the “development,” “production,” operation, installation, maintenance, repair, overhaul, or refurbishing ~~or maintenance~~ of commodities or software enumerated in 0A614.y, ~~or~~ 0B614.y, or 0D614.y

0D617

”Software” ~~“specially designed” for the “development,” “production,” operation, installation, maintenance, repair, overhaul, or refurbishing of commodities controlled by 0A617, “equipment” controlled by 0B617, or materials controlled by 0C617~~, as follows

Related Controls: Software ~~directly related to~~ “required” for installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Category XIII is subject to the controls of USML paragraph XIII(l)

a ”Software” ~~“specially designed”~~ “required” for the “development,” “production,” operation, installation, maintenance, repair, overhaul, or refurbishing ~~or maintenance~~ of commodities or software controlled by 0A617 (except 0A617.y), 0B617 (except 0B617.y), ~~or~~ 0C617 (except 0C617.y) , or 0D617 (except 0D617.y) or “software” for the “development” or “production” of USML Category XIII, not controlled by XIII.l.2

b ~~[Reserved]~~ “Software,” not controlled by the USML or 0D617.a, “required” for “equipment” not controlled by the USML or 0A617 to perform the functions specified in USML Category XIII

y Specific ”software” ~~“specially designed” for the “development,” “production,” operation or maintenance of commodities controlled by 0A617, 0B617, or 0C617~~, as follows:

y.1 Specific “software” ~~“specially designed”~~ “required” for the “development,” “production,” operation, installation, maintenance, repair, overhaul, or refurbishing ~~or maintenance~~ of commodities or materials or software controlled by 0A617.y, 0B617.y, ~~or~~ 0C617.y, or 0D617.y

0D999

~~Specific software, as follows~~ Software “required” for the following:

AT applies ... The Commerce Country Chart ~~is not designed to~~ does not determine AT license requirements for this entry.

RS applies ... The Commerce Country Chart ~~is not designed to~~ does not determine RS license requirements for this entry.

0E001
"Technology" ~~according to the Nuclear Technology Note~~ as defined by NRC or as defined in the USML

0E606
"Technology" ~~"required" for the "development," "production." operation, installation, maintenance, repair, or overhaul of ground vehicles and related commodities in 0A606, 0B606, 0C606, or 0D606~~ , as follows:
Related Controls: ~~Technical data directly related to~~ "Technology" "required" for installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Category VII ~~are~~ is subject to the controls of USML paragraph VII(h)

a "Technology" (other than "technology" controlled by paragraph .y of this entry) "required" for the "development," "production." operation, installation, maintenance, repair, ~~or~~ overhaul, or refurbishing of commodities or "software" ~~enumerated in~~ controlled by ECCN 0A606 (except for ~~ECCNs~~ 0A606,b,c,d,e,f or 0A606.y), 0B606 (except 0B606.y), or 0D606 (except 0D606.y) or "required" for the "development" or "production" of USML Category VII

b ~~[Reserved]~~ "Technology" "required" for the design of, the assembly of components into, and the operation, maintenance and repair of, complete production installations forUSML Category VII or for ECCNs 0A606, 0B606, or 0D606, even if the components of such production installations are not controlled.

c ~~[Reserved]~~ "Technology" "required" for the assembly of components into end=items controlled by USML Category VII or ECCNs 0A606, 0B606, or 0D606, even if the components of such end-items are not controlled.

y Specific "technology" ~~"required" for the "production," "development," operation, installation, maintenance, repair, or overhaul, of commodities enumerated in ECCN 0A606.y, 0B606.y, or 0C606.y~~, as follows

y.1 Specific "technology" "required" for the "production," "development," operation, installation, maintenance, repair, ~~or~~ overhaul, or refurbishing of commodities or "software" enumerated in ~~ECCN 9A610.y, 9B610.y, 9C610.y, or 9D610.y~~ ECCNs 0A606.y, 0B606.y, or 0D606.y

0E614
"Technology" , as follows (See List of Items controlled):
Related Controls: ~~Technical data directly related to~~ "Technology" "required" for installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Category IX ~~are~~ is subject to the controls of USML paragraph IX(e)

a "Technology" (other than "technology" controlled by paragraph .y of this entry) "required" for the "development," "production." operation, installation, maintenance,

repair, overhaul, or refurbishing of commodities or "software" controlled by ECCNs 0A614 (except 0A614.y), 0B614 (except 0B614,y), or 0D614 (except 0D614.y) or "required" for the "development" or "production" of USML Category IX

b ~~[Reserved]~~ "Technology" "required" for the design of, the assembly of components into, and the operation, maintenance and repair of, complete production installations forUSML Category IX even if the components of such production installations are not controlled.

c ~~[Reserved]~~ "Technology" "required" for the assembly of components into end=items controlled by USML Category IX or ECCNs 0A606, 0B606, or 0D606, even if the components of such end-items are not controlled.

y Specific "technology" ~~"required" for the "production," "development," operation, installation, maintenance, repair, or overhaul, of commodities enumerated in ECCN 0A606.y, 0B606.y, or 0C606.y~~, as follows

y.1 Specific "technology" "required" for the "production," "development," operation, installation, maintenance, repair, ~~or~~ overhaul, or refurbishing of commodities or "software" enumerated in ~~ECCN 9A610.y, 9B610.y, 9C610.y, or 9D610.y~~ ECCNs 0A606.y, 0B606.y, or 0D606.y

0E617

"Technology" ~~"required" for the "development," "production." operation, installation, maintenance, repair, or overhaul of ground vehicles and related commodities in 0A606, 0B606, 0C606, or 0D606~~ , as follows:

Related Controls: ~~Technical data directly related to~~ "Technology" "required" for installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Category XIII ~~are~~ is subject to the controls of USML paragraph XIII(l)

a "Technology" "required" for the "development," "production." operation, installation, maintenance, repair, ~~or~~ overhaul, or refurbishing of commodities or "software" ~~enumerated in~~ controlled by ECCN 0A606 (except for ~~ECCNs~~ 0A606,b,c,d,e,f or 0A606.y), 0B606, or 0D606 or "required" for the "development" or "production" of USML Category XIII, not controlled by XIII.l.2

b ~~[Reserved]~~ "Technology" "required" for the design of, the assembly of components into, and the operation, maintenance and repair of, complete production installations forUSML Category XIII, even if the components of such production installations are not controlled.

c ~~[Reserved]~~ "Technology" "required" for the assembly of components into end-items controlled by USML Category XIII or ECCNs 0A617, 0B617, or 0D617, even if the components of such end-items are not controlled.

y Specific "technology" ~~"required" for the "production," "development," operation, installation, maintenance, repair, or overhaul, of commodities enumerated in ECCN 0A617.y, 0B617.y, or 0C617.y~~, as follows

y.1 Specific "technology" "required" for the "production," "development," operation, installation, maintenance, repair, ~~or~~ overhaul, or refurbishing of commodities or

"software" enumerated in ~~ECCN 9A610.y, 9B610.y, 9C610.y, or 9D610.y~~ ECCNs 0A617.y, 0B617.y, or 0D617.y

0E982
"Technology" ~~exclusively~~ "required" for ...

0E984
"Technology" "required" for ...

Rcapitulation for Category 0

A. Specially designed

1. Limit controlled item to its controlled parameters (excluding components)

Change specially designed to "required"

End-item 0A617.a, 0A983, 0B606.a,b,y, 0B614.a,b,y, 0B617.a,b,y, Note to 0B617, 0B986, 0C606.a,y, 0C617.a, 0D606.a, y.1, 0D614.a, y.1, 0D617.a, y.1

Change specially designed to as defined in the USML 0A002

Change specially designed to as defined by NRC 0B001.a, 0B002.e, 0B006.e

Delete specially designed:

other parameters adequate 0A606.a,e,f, 0A614.a

not needed in headings 0A606.y, 0A614.y, 0B606, 0B614, 0B617, 0C606, 0C606.a Note 2, 0C617, 0D606, 0D614, 0D617, 0D606.y, 0D614,y, 0D617.y.

not needed in cross references 0A617 Related Controls

not reasonable in decontrol Note 0A606.b Note 2

Delete specifically designed, modified, adapted, or configured 0C606 Related Controls (1)

2. Limit controlled components referred to as components

Change specially designed to "required"

components now on CCL 0B606.a,b,y, 0B614.a,b,x,y, 0B617.a,b,y,

Option III for individual components but not for all components: 0A606.x, 0A614.x

Delete specially designed

to cover all components Options I and II 0A606.x, 0A614.x, 0A617.e, y.1

3. Limit controlled contained items not using the word components

Change specially designed to as defined by NRC (equipment for plant) 0B005

B. Specially designed or modified

1. Limit controlled item to its controlled parameters (excluding components)

Change specially designed or modified to "required"

New EAR control re WML 21.c: 0D606.b, 0D614.b, 0D617.b

Change specially designed or modified to as defined by NRC or as defined in the USML 0D001

C. Specially designed or prepared

1. Limit controlled item to its controlled parameters (excluding components)

Change specially designed or prepared to as defined by NRC

0B001.b,c,d,e,f,g,h,i,j, 0B002, 0B002.f, 0B003, 0B006.b,c,d

2. Limit controlled components referred to as components

Change specially designed or prepared to as defined by NRC 0A001, 0B001, 0B004, 0B006

3. Limit controlled contained items not using the word components

Change specially designed or prepared to as defined by NRC (equipment for plant) 0A001, 0B001, 0B004, 0B006

E. Usable in or capable of

1. Limit controlled item to the controlled parameters

Delete capable 0B006.b

F Designed

4. Limit what is excepted from control

Change designed solely to rated 0A984, 0A985

G Miscellaneous expressions

1. Limit controlled item to its controlled parameters (excluding components)

Change specific to "required" 0D999
Change exclusively to "required" 0E982
Change specially prepared to as defined by NRC 0C201
Change according to Nuclear Technical Note to as defined by NRC or as defined in the USML. 0E001
Change specified to controlled EAR99
Change directly related to required Related Controls for 0D606, 0D614, 0D617, 0E606, 0E614, 0E617
Delete special 0A606.b Note 3

4. Limit what is excepted from control

Change used exclusively to rated 0A984, 0A985

H Add or delete required

1. Limit controlled item to its controlled parameters (excluding components)

Add "required" 0E984

2. Limit controlled components referred to as components

Change parts n.e.s. to components "required" therefor 0A979
Change parts and accessories to components "required" therefor 0A982, 0A983
Add "required" 0A982

I. New EAR controls using "required"

Conform with WML 22.b.1 re assembly of uncontrolled components of installations for production of ML items: 0E606.b, 0E614.b, 0E617.b

Expand WML 22.b.1 to apply to assembly of all uncontrolled components of ML end-items 0E606.c, 0E614.c, 0E617.e

July 14, 2012

Specially Designed Issues CCL Category 1

1A001

Related Controls: (1) Items ~~specially designed or modified~~ as defined on the USML for missiles or for items on the U.S. Munitions List are subject to the export licensing authority of the Department of State, ...

a. ... ~~specially designed~~ "required"

c.2. ~~Specially designed~~ "Required" for "aircraft," aerospace ~~or missile use~~.

1A002

"Composite" structures or laminates ~~having~~ rated for any of the following ..

Related Controls: ....(3) ... structures ~~"specially designed"~~ for missile applications (including ~~specially designed~~ subsystems and components) are controlled by 9A110

(4) "Composite" structures or laminates ~~specially designed or prepared for use in~~ as defined by NRC for separating uranium isotopes are subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part 110).

Note 2: 1A002 does not control semi-finished items ~~specially designed~~ rated for ...

Note 3: 1A002.b.1 does not apply to ... ~~specially designed~~ rated for ...

Note 4: 1A002 does not apply to finished items ~~specially designed~~ rated for ...

1A004

Protective and detection equipment and components, not ~~specially designed for military use~~ defined in the USML, as follows:

Related Controls: (1) ... (2) See ECCN 1D003 for "software"~~specially designed or modified to enable~~ for equipment to perform the functions of equipment controlled under section 1A004.c ...

(3) See ECCN 1E002.g for control libraries (parametric technical data bases) ~~specially designed or modified to enable~~ for equipment to perform the functions of equipment controlled under section 1A004.c

(1D003 and 1E002.g, determine texts for those ECCNs.)

(4) Chemical and biological protective and detection equipment ~~specifically designed , developed, modified, configured, or adapted for military applications~~ as defined in the USML is subject to the export licensing jurisdiction of the Department of State ... category XIV(f) ... as is commercial equipment that incorporates components or parts controlled under that Category unless those components or parts are: ... and (3) ~~incapable of~~ not rated for replacement without compromising the effectiveness of the device, in which case the equipment is subject to the export licensing jurisdiction of the Department of Commerce under ECCN 1A004.

a. ... ~~designed or modified~~ "required" ... and ~~specially designed~~ components "required" therefor: ...

Note: 1A004.a includes ... PAPR that are ~~designed or modified~~ "required" for ...

b. ... ~~specially designed or modified~~ "required" ...

c. ... ~~specially designed or modified~~ "required" ... and ~~specially designed~~ components "required" therefor

d. ... ~~designed~~ "required" ...

1A005.a
Soft body armor not manufactured to military standards ... and ~~specially designed~~ components "required" therefor.
Notes to ECC1A005:

2. This entry does not control body armor ~~designed~~ rated to provide frontal protection only ...
3. This entry does not apply to body armor ~~designed~~ rated to provide protection only from knife, spike, needle or blunt trauma

1A006
Equipment, ~~specially designed or modified~~ "required" for the disposal of improvised explosive devices, as follows ... and ~~specially designed~~ components ~~and accessories~~ "required" therefor:
Related Controls: Equipment ~~specially designed for military use~~ as defined in the USML for the disposal of improvised explosive devices is subject to the export licensing jurisdiction of the Department of State ...
Related Definitions: 'Disruptors' - Devices ~~specially designed for the purpose of~~ preventing the operation of an explosive device by projecting a liquid, solid or frangible projectile.
(The technical description of 'disruptors' appears to be adequate.)

1A007
Equipment and devices, ~~specially designed~~ "required", to initiate charges and devices containing energetic materials, by electrical means, as follows
Related Controls: High explosives and ~~related~~ equipment ~~specially designed for military use~~ as defined in the USML is subject to the export licensing jurisdiction of the Department of State ...

1A008
Related Controls: (1) All of the following, as defined in the USML. are subject to the export licensing jurisdiction of the Department of State

~~a~~. High explosives and related equipment ~~specially designed for military use~~.
~~b~~ Explosive devices or charges in this entry that utilize USML controlled energetic materials ... ~~if thy have been specifically designed, developed, configured, adapted or modified for a military application~~.
Items
b. Linear shaped cutting charges having all of the following and ~~specially designed~~ components "required" therefor

1A102
... ~~designed~~ "required" ...~~capable of achieving~~ rated for a "range" equal to or greater than 300 km.

1A202
Related Controls: ... (3) "composite" structures ~~specially designed or prepared for use in~~ as

defined by NRC for separating isotopes ...

1A225
Platinized catalysts ~~specially designed or prepared~~ "required" for ... the production of heavy water.
Related Controls: ... (2) Equipment ~~specially designed or prepared~~ as defined by NRC for ...

1A226
~~Specialized~~ packings ~~which may be used in~~ "required" for separating heavy water from ordinary water ...
Related Controls: ... (2) Equipment ~~specially designed or prepared~~ as defined by NRC for ...

1A227
Related Controls: ... (2) Equipment ~~specially designed or prepared~~ as defined by NRC for ...

1A613
Related Controls: ... and technical data (including software) ~~directly related thereto~~ as defined in the USML, are subject to the ITAR. ...

a Armored plate ~~"specially designed"~~ manufactured to comply with a military standard or specification or suitable for military use and not controlled by the USML.

b Shelters ~~"specially designed"~~ "required" to:

b.1. Provide ballistic protection for military systems; or

b.2. Protect against nuclear, biological, or chemical contamination.

d.1.a Soft body armor ~~and protective garments~~ ...

d.1.b Other protective garments, not controlled by USML Category X.a.2, manufactured to military standards or specifications that provide ballistic protection equal to or more than NIJ level III (NIJ 0101.06, July 2008);
Note: See ECCN 1A005 for controls on soft body armor ~~and protective garments~~ ...

e Other personal protective "equipment" ~~"specially designed"~~ "required" for military applications not controlled by the USML or elsewhere in the CCL.

x Option I
~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" for a commodity controlled by ECCN 1A613 or by USML Category X and not controlled in Category X(d) or elsewhere in the USML or the CCL
Option II
~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" for a commodity controlled by ECCN 1A613 or by USML Category X and not controlled in Category X(d) or elsewhere in the USML or the CCL, except (b-3,4,5 carve-outs)
Option III
~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" "required" for a commodity controlled by ECCN 1A613 or by USML Category X and not controlled in Category X(d) or elsewhere

in the USML or the CCL and all "parts," "components," "accessories," or "attachments" for a commodity controlled by ECCN 1A613 or USML Category X accompanied by technology to assemble them into such a commodity

y Specific ~~"parts," "components," "accessories," and "attachments" "specially designed" for a commodity subject to control in this ECCN~~ commodities not elsewhere specified on the USML or the CCL, as follows:

1A995

Protective and detection equipment and components not ~~specially designed for military use~~ defined in the USML and

b. Equipment ~~limited by function or design~~ rated to protect against hazards ~~specific to~~ in civil industries, such as ...

1A999

~~Specific~~ processing equipment ...

AT applies ... The Commerce Country Chart ~~is not designed to~~ does not determine AT license requirements for this entry.

1B001

... as follows ... and ~~specially designed~~ components ~~and accessories~~ "required" therefor

a. ... ~~specially designed~~ "required" ...

b. ... ~~specially designed~~ "required" ...

c ... ~~specially designed or modified~~ "required" ...

d ... ~~specially designed or adapted~~ "required" ...

d.1 ... including ~~special~~ equipment to strain the fiber ...

f. Non-destructive test equip,ent ~~specially designed~~ "required" for "composite" materials, as follows

g. Tow placement machines ... ~~specially designed~~ "required" for the manufacture of "composite" airframe or missile structures.

1B002

... ~~specially designed~~ "required" to avoid contamination and ~~specially designed~~ "required" for ~~use in~~ one of the processes specified in 1C002.c.2

1B003

... ~~specially designed~~ "required" for the manufacture ...

Related Controls: For ~~specially designed~~ production equipment of systems, sub-systems and components controlled by 9A005 to 9A009, 9A011, 9A101, 9A105 to 9A109, 9A111, and 9A116 to 9A120 ~~usable in~~ "missiles", see 9B115.

(9B115 should be defined in that ECCN rather than in 1B003.)

c. ~~Specially designed~~ components "required" for ...

1B101

Equipment, ... ~~usable~~ rated for ... ~~capable of achieving~~ rated for a "range" ... and their

subsystems, as follows ... ; and ~~specially designed~~ components ~~and accessories~~ "required" ~~therefor~~

a. ... ~~designed~~ rated to fabricate ...

b. ... ~~designed~~ rated for the manufacture ...

c Equipment ~~designed or modified~~ "required" for the "production" of ...

d. Equipment ~~designed or modified~~ "required" for ~~special~~ fiber surface treatment or for producing prepregs and preforms controlled by 9A110, as follows:

1B102 a.

... ~~usable~~ rated for ...

b ~~Specially designed~~ components "required" for "production equipment" ~~specified in~~ controlled by 1B002 or 1B102.a

Note 1B102 includes:

a. Plasma generators (high frequency arc-jet) ~~usable~~ rated for ...

b Electroburst equipment ~~usable~~ rated for ...

c. Equipment ~~usable~~ rated for ...

1B115

... ~~specially designed~~ components "required" therefor

1B116

~~Specially designed~~ nozzles "required" for ...

1B117

.... with ~~temperature control capability of the~~ temperature-controlled mixing chamber ...~~specially designed~~ components "required" therefor

1B118

... with ~~temperature control capability of the~~ temperature-controlled mixing chamber... ~~specially designed~~ components "required" therefor

1B119

... ~~specially designed~~ components "required" therefor

1B201

a.2 ~~Specially designed~~ "required" to fabricate ...

a.3 ~~Capable of~~ Rated for winding ...

1B226

Electromagnetic isotope separators ~~designed for, or equipped with,~~ rated for single or multiple ion sources ~~capable of~~ rated for providing .....

Related Controls: (1) Electromagnetic isotope separators ~~specially designed or prepared~~ as defined by NRC for ~~use in~~ separating uranium isotopes ...

ECCN Controls: This entry includes separators ~~capable of~~ enriching stable isotopes ...

1B227
Related Controls: (1) Equipment ~~specially designed or prepared~~ as defined by NRC for the production of heavy water is subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part 110).

1B228
Related Controls: (1) Equipment ~~specially designed or prepared~~ as defined by NRC for the production of heavy water is subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part 110).
a. ~~Designed~~ Rated to operate ...
b. ~~Designed~~ Rated to operate ...

1B229
Related Controls: (1) Equipment ~~specially designed or prepared~~ as defined by NRC for the production of heavy water is subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part 110).

1B230
Pumps ~~capable of~~ rated for ...
Related Controls: (1) Equipment ~~specially designed or prepared~~ as defined by NRC for the production of heavy water is subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part 110).

1B231 b.1
Hydrogen or helium refrigeration units ~~capable of~~ rated for cooling ...

1B232
Related Controls: (1) Equipment ~~specially designed or prepared~~ as defined by NRC for the production of heavy water is subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part 110).
a. ~~Designed~~ Rated for operation with ...
b. ~~Designed~~ Rated for a throughput of hydrogen gas ...

1B233
Related Controls: ... (3) Facilities or plants ~~specially designed or prepared~~ as defined by NRC for the separation of lithium isotopes are subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part 110).

(The above assumes that the 1C233 text for Related Controls is moved to 1B233. NRC clearly controls 1B233.a and may also control 1B233.b.)

b.1 ... columns ~~specially designed~~ "required" for lithium amalgams

1B608
Test, inspection, and other production "equipment" and ~~related commodities~~ components, ~~"specially designed" for the "development " or "production" of commodities enumerated in~~

~~ECCN 1C608 or USML Category V~~ as follows (See List of Items Controlled):

a "Equipment" ~~not elsewhere specified in the CCL or the USML "specially designed"~~ "required" for the "development " or "production" of commodities controlled by ECCN 1C608 or USML Category V, and "components" "required" therefor.

~~b Complete installations not elsewhere specified in the CCL or the USML "specially designed" for the "production" of items controlled by ECCN 1C608 or USML Category V~~

(Deleted for consistency with WAML 18 and 22.b.1.)

c. Environmental test facilities ~~"specially designed"~~ "required" for the certification, qualification, or testing of commodities controlled by ECCN 1A608 or USML Category V, and "equipment" "required" therefor

~~x "Parts," "components," ...~~
~~Note 1. Forgings ...~~

y Specific test, inspection, and other production "equipment" ~~"specially designed"~~ "required" for the "development " or "production" of commodities controlled by this ECCN 1B608 or a defense article in USML Category V, and ~~"parts,"~~ "components~~,~~" ~~"accessories and attachments" "specially designed"~~ "required" therefor, as follows:

1B613

Test, inspection, and other production "equipment" and ~~related commodities~~ components, ~~"specially designed" for the "development " or "production" of commodities enumerated in ECCN 1A613 or USML Category X~~ as follows (See List of Items Controlled):

a Test, inspection, and other production "equipment" ~~not controlled by USML Category X(c) that is "specially designed"~~ "required" for the "development " or "production" of commodities controlled by ECCN 1A613 or USML Category X, and "components" "required" therefor.

b Plasma pressure compaction (P2C) equipment ~~"specially designed"~~ "required" for the production of ceramic or composite body armor plates controlled by ECCN 1A613 or USML Category X

c ~~[Reserved]~~ Environmental test facilities "required" for the certification, qualification, or testing of commodities controlled by ECCN 1A613 or USML Category X, and "equipment" "required" therefor

y Specific test, inspection, and other "production" "equipment" ~~"specially designed"~~ "required" for the "development " or "production" of commodities controlled by ECCN 1B613 or USML Category X, and "components" "required" therefor, as follows:

1B999

~~Specific~~ processing equipment, n.e.s., as follows

AT applies ... The Commerce Country Chart ~~is not designed to~~ does not determine AT license requirements for this entry.

RS applies ... The Commerce Country Chart ~~is not designed to~~ does not determine RS license requirements for this entry.

c. Industrial process control hardware/systems ~~designed~~ for power industries, n.e.s.;

d. ... cooling systems ~~capable of~~ rated for continuous cooling ...

1C001
Materials ~~specially designed~~ "required" for ~~use as~~ absorbers of ...
c.1.a ... not ~~capable of~~ rated for withstanding temperatures exceeding
c.1.b ... not ~~capable of~~ rated for withstanding temperatures exceeding

1C002
Related Controls: ...(3) Aluminum alloys and titanium alloys in physical forms and finished products ~~specially designed or prepared~~ as defined by NRC for ~~use in~~ separating uranium isotopes are subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part 110).

1C006.d
Note:1C006.d does not apply to materials ~~specified~~ rated and packaged as medical products.

1C101
Materials for reduced observables ... ~~for applications usable in~~ "required" for rockets ... ... ~~capable of achieving~~ rated for a "range" equal to or greater than 300 km, and ~~their~~ subsystems "required" therefor
Related Controls: (1) Materials controlled by this entry include structural materials and coatings (including paints), ~~specially designed~~ "required" for reduced or tailored reflectivity or emissivity .. (2) This entry does not control coatings (including paints) ~~when specially used~~ rated for the thermal control of satellites.

1C102
Resaturated pyrolized carbon-carbon materials ~~designed~~ "required" for ...

1C107 b
... graphites, ~~usable~~ "required" for rocket nozzles and reentry vehicle nose tips.
c ... materials ... "required" for ~~use in~~ radomes ~~useable in~~ "required" for rockets ... ~~capable of achieving~~ rated for a "range" ...
d Silicon-carbide materials ~~usable in~~ "required" for rockets ... ~~capable of achieving~~ rated for a "range" ...
d.1 ... ~~useable~~ "required" ...
d.2 ... ~~usable~~ "required" ...

1C111.b.2
Hydroxy-terminated polybutadiene not controlled by USML Category V.e.7
a.3.e ~~Inhibited red fuming nitric acid (IRFNA)~~
Technical Note: Mixed Oxides of Nitrogen are solutions of ... ~~that can be used in~~ rated for missile systems

1C116
Maraging steels (iron alloys ~~generally characterized by~~ with ...), ...

Related Contrtols: ... . (3) Maraging steel, in physical forms and finished products and ~~specially designed or prepared~~ as defined by NRC for ~~use in~~ separating uranium isotopes, is subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part 110).

1C117
Materials for the fabrication of missile components for rockets or missiles ~~capable of achieving~~ rated for a "range" equal to or greater than 300 km, as follows
c.2 ~~Able~~ Rated to be machined to any of the following products ...

1C118
... ~~having~~ rated for all of the following characteristics ...
a. ~~Having~~ ...
a.1 ~~Containing~~ ...
a.2 ~~Having~~ ....
b ~~Having~~ ...

1C202
Related Controls: ... (3) Aluminum alloys and titanium alloys, in physical forms and finished products and ~~specially designed or prepared~~ as defined by NRC for ~~use in~~ separating uranium isotopes, are subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part 110).
Related Definition: The phrase ~~"capable of"~~ 'rated for' in 1C202.a.1 and b.1 refers to aluminum alloys ~~and~~ or titanium alloys either before or after heat treatment.
a.1 ~~"Capable of"~~ 'Rated for'...
b.1 ~~"Capable of"~~ 'Rated for'...

1C216
Maraging steel ... ~~"capable of"~~ rated for ...
Related Controls: ... (3) Maraging steel, in physical form and finished products ~~specially designed or prepared~~ as defined by NRC for ~~use in~~ separating uranium isotopes, is subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part110).
Related Definition: The phrase ~~"capable of"~~ 'rated for' in the ECCN heading refers to maraging steel either before or after heat treatment.

1C226
ECCN Controls: This entry does not control manufactures ~~specially designed as~~ rated for weights or gamma-ray collimators.:

1C230
ECCN Controls:This entry does not control the following:
b. Oxide shapes in fabricated or semi-fabricated forms ~~specially designed~~ rated for electronic components ~~parts~~ or as substrates for electronic circuits.

1C233

Related Controls: ... (2) Facilities or plants ~~specially designed or prepared~~ as defined by NRC for the separation of lithium isotopes are subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part 110).

(This statement of NRC jurisdiction belongs in 1B233, not 1C233.)

1C234

Related Controls: ... (2) Zirconoium metal and alloys in the form of tubes or assemblies of tubes~~,~~ ~~specially designed or prepared~~ for as defined by NRC ~~use in~~ a reactor, are subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part 110).

1C240

Related Controls: ... (2) Nickel powder and porous nickel metal, ~~specially designed or prepared~~ as defined by NRC for ~~use in~~ separating uranium isotopes, are subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part 110).

1C355

CW applies to entire entry. The Commerce Country Chart ~~is not designed to~~ does not determine licensing requirements for items controlled for CW reasons.

1C395

CW applies to entire entry. The Commerce Country Chart ~~is not designed to~~ does not determine licensing requirements for items controlled for CW reasons.

Related Definitions: ... pre-packaged materials of defined composition that are ~~specifically~~ developed, packaged and marketed for medical, ... purposes.

1C608

Unit: ~~End-items in number; parts, components, accessories, and attachments in $ value~~ kilograms

j Pyrotechnic devices ~~"specially designed"~~ for commercial purposes ... containing greater than 3.0 kg, but not more than 5.0 kg of controlled materials

k Other commercial explosive devices or charges ~~"specially designed"~~ for commercial applications ... containing greater than 1.0 kg, but not more than 5.0 kg of controlled materials

m Note 1 to ~~1C111~~ 1C608.m

Note 2 to ~~1C111~~ 1C608.m

Note 3 to ~~1C111~~ 1C608.m

Note 1 to ~~1C111~~ 1C608.l and m

n Any explosive, propellants, oxidizers, pyrotechnics, fuels, binders, or additives ~~"specially designed"~~ for military application not listed elsewhere in USML Category V or the CCL.

1C980

Control(s); ... The Commerce Country Chart ~~is not designed to~~ does not determine licensing requirements for items controlled for SS reasons.

1C981

Control(s); ... The Commerce Country Chart ~~is not designed to~~ does not determine licensing

requirements for items controlled for SS reasons.

1C982
Control(s); ... The Commerce Country Chart ~~is not designed to~~ does not determine licensing requirements for items controlled for SS reasons.

1C983
Control(s); ... The Commerce Country Chart ~~is not designed to~~ does not determine licensing requirements for items controlled for SS reasons.

1C984
Control(s); ... The Commerce Country Chart ~~is not designed to~~ does not determine licensing requirements for items controlled for SS reasons.

1C988
Control(s); ... The Commerce Country Chart ~~is not designed to~~ does not determine licensing requirements for items controlled for SS reasons.

1C991
Related Definitions: ... "medical products" are (1) Pharmaceutical formulations ~~designed~~ for testing and human administration ... :diagnostic and food testing kits" are ~~specifically~~ developed, ... "Vaccine" ... that ~~is intended to stimulate~~ stimulates ...

1C992 a Shaped charges ~~specially designed~~ "required" for ...:
b Shaped charges ~~specially designed~~ "required" for ...:
k Pyrotechnic devices ~~when designed exclusively~~ rated for ...:

1C995
RS applies ... The Commerce Country Chart ~~is not designed to~~ does not determine RS license requirements for this entry.

Related Definitions: ... "medical ... kits" are prepackaged materials of defined composition that are ~~specifically~~ developed ... for medical purposes.

1C997
RS applies ... The Commerce Country Chart ~~is not designed to~~ does not determine RS license requirements for this entry.

1C999
~~Specific~~ materials, n.e.s., as follows
AT applies ... The Commerce Country Chart ~~is not designed to~~ does not determine AT license requirements for this entry.
RS applies ... The Commerce Country Chart ~~is not designed to~~ does not determine RS license requirements for this entry.

1D001
"Software" ~~specially designed or modified~~ "required" ...

1D002
"Software" "required" for the "development" of organic "matrix", metal "matrix", or carbon "matrix" laminates or "composites"

1D003
"Software" ~~specially designed or modified to enable~~ "required" for equipment to perform the functions of equipment controlled under 1A004.c or 1A004.d

1D101
"Software" ~~specially designed or modified~~ "required" ...

1D103
... ~~specially designed~~ "required" for ... and acoustic signatures, ~~for applications usable in~~ "required" for "missiles" or ~~their~~ for subsystems "required" therefor
Related Controls: (1) This entry includes "software" ~~specially designed~~ for analysis of signature reduction.

1D201
... ~~specially designed or modified~~ "required"

1D390
"Software" "required" for process control ~~that is specifically configured~~ to control or initiate "production" of chemicals controlled by 1C350. ...

1D608
"Software" ~~"specially designed" for the "development," "production," operation, or maintenance of commodities controlled by 1B608 or 1C608~~, as follows
Related Controls: "Software" ~~directly related to~~ "required" for installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Categories III, IV, or V ~~are~~ is subject to the controls of those USML Categories, respectively.

a "Software" (other than "software" controlled in paragraph .y of this entry) ~~"specially designed"~~ "required" for the "development," "production," operation, installation, maintenance, repair, overhaul, or refurbishing ~~or maintenance~~ of commodities or software controlled by 1B608 (except 1B608.y), ~~or~~ 1C608 (except 1C608.y), or 1D608 (except 1D608.y) or "software" for the "development" or "production" of USML Category V

b ~~[Reserved]~~ "Software," not controlled by the USML or 1D608.a, "required" for "equipment" not controlled by the USML or 1A608 to perform the functions specified in USML Category V

y Specific "software" ~~"specially designed" for the "development," "production," operation~~

~~or maintenance of commodities controlled by 1B608.y~~, as follows:

y.1 ~~[Reserved]~~ "Software" "required" for the "development," "production," operation, installation, maintenance, repair, overhaul, or refurbishing of commodities, materials, or software controlled by 1B608.y, 1C608.y, or 1D608.y

1D613

"Software" ~~"specially designed" for the "development," "production," operation, installation, maintenance, repair, overhaul or refurbishing of commodities controlled by 1A613 or 1B613~~, as follows

Related Controls: "Software" ~~directly related to~~ "required" for installation, operation, maintenance, repair, overhaul, or refurbishing of articles controlled by USML Category X is subject to the control of USML paragraph X(e)

a "Software" (other than "software" controlled by paragraph .y of this entry) ~~"specially designed"~~ "required" for the "development," "production," operation, installation, maintenance, repair, overhaul, or refurbishing ~~or maintenance~~ of commodities or software controlled by 1A613 (except 1A613.y), ~~or~~ 1B613 (except 1B613.y), or 1D613 (except 1D613.y) or "software" for the "development" or "production" of USML Category X

b ~~[Reserved]~~ "Software," not controlled by the USML or 1D613.a, "required" for "equipment" not controlled by the USML or 1A613 to perform the functions specified in USML Category X

y Specific "software" ~~"specially designed" for the "development," "production," operation or maintenance of commodities controlled by 1A613 or 1B613~~, as follows:

y.1 "Software" ~~"specially designed"~~ "required" for the "development," "production," operation, installation, maintenance, repair, overhaul, or refurbishing ~~or maintenance~~ of commodities or software controlled by 1A613.y, ~~or~~ 1B613.y, or 1D613.y

1D993

"Software" ~~specially designed~~ "required" for

1D999
~~Specific~~ software, ...
AT applies ... The Commerce Country Chart ~~is not designed to~~ does not determine AT license requirements for this entry.
a. ... ~~specially designed~~ "required"
b ... ~~specially designed~~ "required"

1E001
Related Controls: ... (2) See 1E002.g for control libraries (parametric technical data bases) ~~specially designed or modified to enable equipment to perform the funcitions of equipment controlled under 1A004.c (Nuclear, biological and chemical (NBC) detection systems)~~.
(1E001.g should describe its contents.)

1E002 a.
"Technology" "required" for ...
b. "Technology" "required" for ...
c "Technology" "required" for ...
d "Technology" "required" for ...
e "Technology" "required" for ...
f "Technology" "required" for ...
g Libraries (parametric technical databases) ~~specially designed or modified to enable~~ "required" for equipment to perform the functions of equipment controlled under 1A004.c or 1A004.d

1E102
Related Controls: (1) This entry includes databases ~~specially designed~~ "required" for analysis of signature reduction.

1E103
"Technical data" ...~~when used~~ "required" for the "production" of "composites" or partially processed "composites" ~~, usable for~~ equipment or materials specified in .....

1E104
"Technology" "required" for

1E350
... facilities ~~designed or intended to produce~~ producing chemicals controlled by 1C350

1E355
"Technology" "required" for

1E608

"Technology" ~~"required" for the "development," "production," operation. Installation, maintenance, repair, overhaul or refurbishing of equipment controlled in 1B608 or materials controlled by 1C608~~, as follows

Related Controls: ~~Technical data directly related to~~ "Technology" "required" for installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Categories III. IV, or V ~~are~~ is subject to the controls of those USML Categories respectively.

a "Technology" "required" for the "development," "production," operation. Installation, maintenance, repair, overhaul or refurbishing of ~~material~~ equipment controlled in 1B608 (except 1B608.y), ~~or~~ materials controlled by 1C608, or "software" controlled by 1D608 (except 1D608.y) or "required" for the "development" or "production" of USML Category V

b ~~[Reserved]~~ "Technology" "required" for the design of, the assembly of components into, and the operation, maintenance and repair of, complete production installations forUSML Category V or for ECCNs 1B608, 1C608, or 1D608, even if the components of such production installations are not controlled.

c ~~[Reserved]~~ "Technology" "required" for the assembly of components into end=items controlled by USML Category V or ECCNs 1B608, 1C608, or 1D608, even if the components of such end-items are not controlled.

y Specific "technology" ~~"required" for ... 1B608.y ... or ... 1D608.y~~, as follows

y.1 ~~[Reserved]~~ Specific "technology" "required" for the "development," "production," operation, installation, repair, maintenance, overhaul, or refurbishing of commodities controlled by 1B608.y or "software" controlled by 1D608.y

1E613

"Technology" ~~"required" for the "development," "production," operation. Installation, maintenance, repair, overhaul or refurbishing of commodities controlled in 1A613 or 1B613 or software controlled by 1D613~~, as follows

Related Controls: ~~Technical data directly related to~~ "Technology" "required" for installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Category X is subject to the control of USML paragraph X(e) of the ITAR.

a "Technology" (other than "technology" controlled by paragraph .y of this entry) "required" for the "development," "production," operation. Installation, maintenance, repair, overhaul or refurbishing of commodities or "software" controlled by ECCNs 1A613 (except 1A613.y), 1B613 (except 1B613.y), ~~or~~ 1D613 (except 1D613.y) or "required" for the "development" or "production" of USML Category X

b ~~[Reserved]~~ "Technology" "required" for the design of, the assembly of components into, and the operation, maintenance and repair of, complete production installations forUSML Category X or for ECCNs 1A613, 1B613, or 1D613, even if the components of such production installations are not controlled.

c ~~[Reserved]~~ "Technology" "required" for the assembly of components into end=items controlled by USML Category X or ECCNs 1A613, 1B613, or 1D608, even if the components of such end-items are not controlled.

y Specific "technology" ~~"required" for ... 1B613.y ... or ... 1D613.y~~, as follows

y.1 Specific "technology" "required" for the "development," "production," operation, installation, repair, maintenance, ~~or~~ overhaul, or refurbishing of commodities or

“software” controlled by 1A613.y, 1B613.y, or 1D613.y

1E994
“Technology” “required” for ...

1E998
“Technology” “required” for ...

Recapitulation for Category 1

A. Specially designed

1. Limit controlled item to its controlled parameters (excluding components)

Change specially designed to "required" 1A001a, c.2, 1A004.a, 1A007, 1A008.b, 1B001.a,b,f,g, 1B002 2x, 1B003, 1B115, 1B116, 1B117, 1B201.a.2, 1B233.b.1, 1B608.a,c,y, 1B613.a,b,y, 1C101 Related Controls (1), 1C992.a, b, 1D103, 1D608.a, 1D613.a, y.1, 1D993, 1D999.a, b, 1E102

Change specially designed or adapted to "required" 1B001.d

Change specially designed for use in to "required" 1B002, 1C001

Change specially designed to rated 1C226 ECCN Controls, 1C230

Change specially designed as to rated for 1C226

Change specially designed to manufactured to comply with military standards or specifications or suitable for military use 1A613.a

Change specially designed for military use to as defined in the USML 1A004, 1A006 Related Controls, 1A007 Related Controls, 1A008 Related Controls (1)a, 1A995, 1D103 Related Controls

Delete specially designed 1A002 Related Controls (3) 2x, 1A006 Related Definition, 1A613.b.e,.y, 1B003 Related Controls, 1B608, 1B608.b, 1B613, 1C608.j.k.n, 1D608, 1D608.y. 1D613, 1D613.y,

2. Limit controlled components referred to as components

Change specially designed to "required" 1A004.a, c, 1A005.a, 1A006, 1A613.x Option III, 1B001, 1B003.c, 1B018.a.4, b, 1B101, 1B102.b, 1B118, 1B119, 1B608.a,y, 1B613.a

Delete specially designed 1A613.x options 1,II, 1B608.a,c,x

4. Limit what is excepted from control

Change specially designed to rated 1A002 Notes 2, 3, 4

B Specially designed or modified

1. Limit controlled item to its controlled parameters

Change specially designed or modified to "required" 1A004.b, c, 1A006,1D001, 1D018, 1D101, 1D201

Change specially designed or modified to enable to "required" for 1D003, 1E002.g

Change specially designed or modified to as defined on the USML 1A001 Related Controls

Delete specially designed or modified to enable 1A004 Related Controls (2), (3), 1E001 Related Controls (2)

C. Specially designed or prepared

1. Limit controlled item to the controlled parameters

Change specially designed or prepared to "required" 1A225

Delete specially designed or prepared for use in to as defined by NRC 1A002, 1A202 Related Controls

Change specially designed or prepared to as define by NRC 1A225, 1A226, 1A227, 1B226, 1B227, 1B228, 1B229, 1B230, 1B232, 1B233, 1C116, 1C202, 1C233, 1C240 Related Controls

D Designed or modified

1. Limit controlled item to its controlled parameters

Change designed or modified to "required" 1A004.a Note, 1B101.c, d

E. Usable in or capable of

1. Limit controlled item to the controlled parameters

Change which may be used in to "required" for 1A226
Change usable in to "required" for 1C101, 1C107.c, d
Change usable to "required" 1C107.b, d.1, d.2, 1E103
Change use in to "required" 1C107.c
Change when used to "required" 1E103
Change for applications usable in to "required" for 1D103
Change incapable of to not rated for 1A004 Related Controls (4)
Change capable of achieving to rated for 1A102, 1B101, 1C101, 1C107.c, d, 1C117
Change capable of to rated for 1B018.b, 1B201.a.3, 1B230, 1B231.b.1, 1B232.a,b, 1B999.d, 1C202 Related Definition, 1C202.a.1, b.1, 1C216 heading, 1C216 Related Definition
Change usable to rated 1B101, 1B102.a, 1B102 Note a, b, c
Change when specially used to rated 1C101 Related Controls
Change able to rated 1C117.c.2
Delete capable of 1B003 Related Controls
Delete usable for 1E103

4. Limit what is excepted from control

Change when specially used to rated 1C101 Related Controls (2), 1C202 Related Controls

F. **Designed**

1. Limit controlled item to the controlled parameters

Change designed to "required" 1A004.d, 1A102, 1C102
Change designed or intended to "required" 1E350
Change limited by function or design to rated 1A995.b
. Change designed to rated 1A005 Notes 2 and 3, 1B101.a, b, 1B228.a, b
Change designed for or equipped with to rated for 1B226
Change when designed exclusively to rated 1C992.c
Change designed or intended to produce to producing 1E350
Delete designed in Country Chart does not apply 1A999, 1B999, 1C395, 1C980, 1C981, 1C982, 1C983, 1C984, 1C988, 1C991, 1C995, 1C997, 1C999, 1D999

4 Limit what is excepted from control

Change designed to rated 1A005 Note 2

G **Miscellaneous expressions**

1. Limit controlled item to the controlled parameters

Change specifically configured to "required" 1D390

Change directly related to required Related Controls for 1D608, 1D613, 1E608, 1E613

Change having to rated for 1A002, 1C118

Change specified to rated 1C006.d Note

Change specifically designed, developed, modified, configured, or adapted for military applications to as defined in the USML 1A004 Related Controls (4), 1A008 Related Controls(1)b

Change directly related to to as defined in the USML 1A613 Related Controls

Change generally characterized by to with 1C116

Delete specific 1A995.b, 1A999, 1B999. 1C999, 1D999

Delete specifically configured 1D390

Delete specifically in Related Definitions 1C991, 1C995

Delete special 1B001.d.1, 1B101.d

Delete having 1C118.a, a.2, b

Delete containing 1C118.a.1

3. Limit controlled contained items not using the word components

Delete accessories 1B001, 1B101

Delete end-items, parts, components, accessories and attachments 1C608 Unit

H Add or delete required

1. Limit controlled item to the controlled parameters

Add "required" 1B613.c, 1D002, 1D390, 1D608.b, y.1, 1D613.b, 1E002.a,b,c,d,e,f, 1E104, 1E355, 1E608,a,y.1, 1E613.a, 1E994, 1E998

Delete "required" 1E608, 1E608.y, 1E613, 1E613.y

2 Limit controlled components referred to as components

Add "required" 1B608.a, 1B613.y

3. Limit controlled contained items not using the word components

Add "required" (subsystems for "missiles") 1C101, 1D103

I. New EAR controls using "required"

Conform with WML 22.b.1 re assembly of uncontrolled components of installations for production of ML items: 1E608.b, 1E613.b

Expand WML 22.b.1 to apply to assembly of all uncontrolled components of ML end-items 1E618.c, 1E613.c

\ July 7, 2012

Specially Designed Issues CCL Category 2

2A226
Related Controls: .... (3) Valves ~~specially designed or prepared~~ as defined by NRC for ...

2A290
Generators and other equipment ~~specially designed, prepared, or intended for use with~~ "required" for nuclear plants
Related Controls: ... (4) Certain nuclear equipment ~~specially designed or prepared for use in~~ as defined by NRC for nuclear plants ...
a. Generators ... ~~designed or intended for use in~~ "required" for a nuclear reactor;
b. Process control systems ~~intended for use with~~ "required" for ...

2A291
Equipment, ... ~~related to~~ "required" for nuclear material handling and processing ...
Unit: Equipment in number; ~~parts and accessories~~ components in $ valuer
Related Controls: ...(4) Certain equipment ~~specially designed or prepared for use in~~ as defined by NRC for a nuclear reactor ... (5) Nuclear radiation detection and measurement devices ~~specially designed or modified for military purposes~~ as defined in the USML ...
a. Process control systems ~~intended for use with~~ "required" for nuclear reactors
b Simulators ~~specially designed~~ "required" for "nuclear reactors'.
c Casks ~~that are specially designed~~ "required" for transportation of ...
d Commodities~~, parts and accessories specially designed or prepared for use with~~ "required" for nuclear plants (e.g., ...)
~~e~~ Radiation detectors and monitors ~~specially designed~~ "required" for ...

2A292
Piping, fittings and valves, not controlled by NRC item 8(a), ...
Unit: ... ~~parts and accessories in $ value~~
Related Controls: ...(4) Piping, fittings, and valves ~~specially designed or prepared~~ as defined by NRC for certain nuclear uses ...
a. Pressure tube, pipe, and fittings ... ~~suitable~~ rated for operation at ...

2A293
Pumps ~~designed~~ rated to move molten metals by electromagnetic forces.

2A983
Explosives or detonator detection equipment ... and ~~parts and~~ components~~, n.e.s.~~ "required" therefor
Related Controls: (1) For the purpose of this entry, automated decision making is the ability of the equipment to detect explosives or detonators at the ~~design or~~ operator-selected level of sensitivity and provide an automated alarm ...

2A984
Concealed object detection equipment ... and ~~parts and~~ components, "required" therefor

2A991 a.1
Manufactured for use at Rated for ...
a.2 ... ~~, according to the manufacturer's specifications, are specially designed to enable the bearings~~ are rated to operate ...
b1 ... ~~, according to the manufacturer's specifications, are specially designed to enable the bearings~~ are rated to operate ...
c ... ~~manufactured for use at~~ rated for ...
e ... ~~manufactured for use at~~ rated for ...

2A994
Portable electric generators and ~~specially designed parts~~ components "required" therefor

2A999
~~Specific~~ processing equipment ...
AT applies ...The Commerce Country Chart ~~is not designed to~~ does not determine AT licensing requirements for this entry.

B.
Test, Inspection and Production Equipment
Technical Notes
2.b Parallel rotary axes ~~designed~~ for mounting of separate workpieces
2.c Co-linear rotary axes ~~designed~~ for manipulating the same workpiece by holding it in a chuck from different ends.

2B001
Machine tools ..., ~~which, according to the manufacturer's technical specifications, can be equipped with~~ rated for electronic devices for "numerical control"; ~~and specially designed components~~ as follows
NP applies ... EXCEPT: (1) Turning machines under 2B001.a ~~with a capacity no~~ not greater than 35 mm diameter; (2) bar machines (Swissturn), limited to machining only bar feed through, if maximum turning bar diameter is equal to or less than 42 mm and ~~there is no capability of~~ not mounting chucks. ~~(Machines may have drilling and/or milling capabilities for machine parts with diameters less than 42 mm)~~
Unit: ... ~~components in $ value~~
Note 1: 2B001 does not control ~~special purpose~~ machine tools ~~limited to~~ rated for the manufacture of gears. ...
Note 2: 2B001 does not control ~~special purpose~~ machine tools ~~limited to~~ rated for the manufacture of ...
Note 3: A machine tool ~~having~~ rated for at least two of the following three turning, milling or grinding ~~capabilities~~ (e.g., ~~a turning machine with milling capability~~ rated for milling as well as turning) ...

a.2 Two or more axes ~~which can~~ rated to be coordinated simultaneously for "contouring control"
Note: 2B001.a does not control turning machines ~~specially designed~~ rated for producing contact lenses, ~~having~~ rated for all of the following:
a Machine controller ~~limited to using~~ with ophthalmic based software ...
a.1 ~~Limited to~~ Rated for cylindrical grinding; and
a.2 ~~Limited to~~ Rated for a maximum workpiece capacity ...
b.2 Five or more axes ~~which can~~ rated to be coordinated simultaneously for "contouring control"

c.1.b Five or more axes ~~which can~~ rated to be coordinated simultaneously for "contouring control"

c.2 Five or more axes ~~which can~~ rated to be coordinated simultaneously for "contouring control"
Notes: 2B001.c does not control grinding machines, as follows: ...
b Machines ~~designed specifically as~~ rated for iig grinders that ...
Note: 2B001.c does not control grinding machines, as follows: ...
b. Machines ~~designed specifically~~ rated as jig grinders that do not have ...
d ... two or more rotary axes ~~which can~~ rated to be coordinated simultaneously for "contouring control"

e.2.a ~~Can~~ Rated to be coordinated simultaneously for "contouring control"

f Deep-hole-drilling machines ... ~~having~~ rated for a depth of bore ~~capability~~ exceeding 5m ~~and specially designed components therefor~~

2B002

c Four or more axes ~~which can~~ rated to be coordinated simultaneously for "contouring control"

2B003

"Numerically controlled" or manual machine tools, and ~~specially designed~~ components, controls and accessories "required" therefor for ... gears ...

2B004

Hot "isostatic presses" ... and ~~specially designed~~ components and accessories "required" therefor
Related Controls: ... (3) For ~~specially designed~~ dies, molds and tooling, see ECCNs 1B003, 1B101.d, 2B018, 2B104, 2B204, 9B004, and 9B009. ~~(4) For additional controls on dies, molds and tooling, see ECCNs 1B101.d, 2B104 and 2B204.~~

2B005

Equipment ~~specially designed~~ "required" for the disposition ... and ~~specially designed~~ automated handling, positioning, manipulation and control components "required" therefor.
Related Controls: (1) This entry does not control chemical vapor deposition, cathodic arc, sputter deposition, ion plating or ion implantation equipment~~, specially designed~~ rated for cutting or machining tools. (2) ... (3) Chemical Vapor Deposition furnaces ~~designed or modified~~ for densification of carbon-carbon composites are controlled by 2B105.

e. Sputter deposition production equipment ~~capable of~~ rated for current densities ...
g ... ~~capable of~~ rated for ...

2B006
b.1.c.2.b. ~~Capable of~~ Rated for achieving ...
b.1.d "Electronic assemblies" ~~specially designed~~ "required" to provide feedback ~~capability~~ ...
Note: 2B006.b.1 does not control measuring interferometer systems, with an automatic control system ~~that is designed to use~~ with no feedback techniques, ..
Note: Machine tools, which ~~can be used~~ are rated also as measuring machines, are controlled if ...

2B007
"Robots" ... and ~~specially designed~~ controllers and "end-effectors "required" therefor
a. ~~Capable~~ Rated in real time ~~of~~ for full three-dimensional image processing ...
b ~~Specially designed~~ "Required" to comply ...
Note: 2B007.b does not apply to "robots" ~~specially designed~~ rated for paint-spraying booths.
c ~~Specially designed or~~ rated as radiation-hardened ...
d ~~Specially designed~~ Rated to operate ...

2B008
Assemblies of units, ~~specially designed~~ "required" for machine tools ...
a,b Note: 2B008.a and 2B008.b apply to units, which ~~are designed to~~ determine the positioning information for feedback control ...
c "Compound rotary tables" and "tilting spindles", ~~capable of~~ rated for upgrading, ~~according to the manufacturer's specifications,~~ machine tools to or above the levels controlled by 2B001 to 2B009

2B009
Spin-forming machines and flow-forming machines~~, which, according to the manufacturer's technical specification, can~~ rated to be equipped with"numerical control" units or a computer control ...
NP applies ... spin -forming machines ~~capable of~~ rated for flow forming function
a. Two or more controlled axes of which at least two ~~can~~ are rated to be coordinated simultaneously for "contouring control"

2B104
b ~~Designed to achieve and maintain~~ a controlled thermal environment ...
c ~~Possessing a~~ chamber cavity with an inside diameter of 254 mm or greater.

2B105
Chemical vapor deposition (CVD) furnaces, ... ~~designed or modified~~ "required" for the densification of carbon-carbon composites. ...

2B109

Flow-forming machines ... and ~~specially designed~~ components "required" therefor

a.1 ~~According to the manufacturer's technical specifications, can be equipped with~~ Rated for "numerical control" units ... ...

~~b~~ ~~Specially designed~~ components "required" for ...

Technical Note 2. 2B109 does not control machines that are not ~~usable in~~ "required" for the "production" of propulsion components and equipment (e.g., motor cases) for systems in 9A005, 9A007.a, or 9A105.a.

2B116

Vibration test systems and equipment ~~usable~~ "required" for rockets, missiles, or unmanned aerial vehicles ~~capable of achieving~~ rated for a "range" equal to or greater than 300 km, and their subsystems~~,~~ and components therefor, as follows

(Note that comma would be moved so that "required" would modify subsystems as well as components.)

a. ... ~~capable of~~ rated for ...

b Digital controllers, combined with ~~specially designed~~ vibration test "software" "required" therefor, ... and ~~designed for use with~~ "required" for vibration test equipment described in 2B116.a

c Vibration thrusters ... ~~capable of~~ rated for imparting a force equal to or greater than 50 kN ... and ~~usable in~~ "required" for vibration test systems described in 2B116.a

d Test piece support structures ... ~~designed~~ "required" to combine multiple shaker units ... ~~capable of providing~~ rated to provide an effective combined force ... and ~~usable in~~ "required" for vibration test systems described in 2B116,a

2B117

Equipment and process controls... ~~designed or modified~~ "required" for ...

2B119

Balancing machines

a.1 Not ~~capable of~~ rated for ...

a.2 ~~Capable of~~ Rated for

a.3 ~~Capable of~~ Rated for

a.4 ~~Capable of~~ Rated for

Note: 2B119.a. does not control balancing machines ~~designed or modified~~ rated for ...

b Indicator heads ~~designed or modified for use with~~ rated for

2B120

Motion simulators ... ~~capable of~~ rated for ...

b ~~Designed or modified~~ Rated to ...

c.1.a ~~Capable of~~ Rated for rates of rotation ...

Note: 2B120 does not control rotary tables ~~designed or modified~~ rated for ...

2B121

Positioning tables (equipment ~~capable of~~ rated for precise rotary position in any axis) ...
Note: 2B121 does not control rotary tables ~~designed or modified~~ rated for ...

2B122
Centrifuges ~~capable of~~ rated for imparting accelerations above 100 g and ~~designed or modified~~ sliprings or integrated non-contact devices "required" for such centrifuges and ~~capable of~~ rated for transferring electric power, signal information, or both

2B201
Machine tools, ... ~~which, according to the manufacturer's technical specifications, can~~ rated to ...
Unit: Equipment in number~~; parts and accessories in $ value~~
a Machine tools for turning~~, that have~~ rated:for
Note: Item 2B201.a does not control bar machines (Swissturn), ~~limited to~~ rated for machining only ... and ~~there is no capability of mounting~~ not rated to mount chucks
Note: 2B201.c does not control the following grinding machines: ...
c Tool or cutter grinding machines with "software" ~~specially designed~~ rated for the production of tools or cutters; ...

2B204
b. Dies, molds, and controls, ~~specially designed~~ "required" for "isostatic presses" controlled by 2B204.a.

2B206
Unit: Equipment in number~~; parts and accessories in $ value~~
ECCN Controls: (1) Machine tools ~~that can be used as~~ rated for measuring ~~machines~~

2B207
ECCN Controls: This entry does not control "robots" ~~specially designed~~ rated for ...
a. "Robots" or "end-effectors" ~~specially designed~~ rated to comply ....
b Control units ~~specially designed~~ "required" for ...

2B209
Flow-forming machines, spin-forming machines ~~capable of~~ rated for flow forming ...
Unit: Equipment and mandrels in number~~; parts and accessories in $ value~~
a.2 ~~According to the manufacturer's technical specifications, can~~ Rated to ...
b. Rotor-forming mandrels ~~designed~~ "required" to ...

2B225
Remote manipulators ~~that can be used~~ "required" ...
Related Controls: ...(3) Remote manipulators ~~specially designed or prepared for use in~~ as defined by NRC for fuel reprocessing ...
a. ~~A capability of~~ "Required" for penetrating ...
b. ~~A capability of~~ "Required" for bridging ...

2B226
ECCN Controls. 2B226.a does not control furnaces ~~designed~~ rated for the processing of semiconductor wafers.
a.1 ~~Capable of~~ Rated for operation above ...
a.3 ~~Designed~~ Rated for power inputs ...
b Power supplies, with a ~~specified~~ rated power output of 5 kW or more, ~~specially designed~~ "required" for furnaces controlled by 2B226.a.

2B227 a.1
Consumable electrode ~~capabilities~~ between ...
a.2 ~~Capable of~~ Rated for operating with ...
b.2 ~~Capable of~~ Rated for operating ...
c. Computer control and monitoring systems ~~specially configured~~ "required" for ...

2B229 a
Centrifugal balancing machines ~~designed~~ rated for ... and
a.2 Mass ~~capability of~~ from 0.9 to 23 kg; and
a.3 ~~Capable of~~ balancing speed ...
b Centrifugal balancing machines ~~designed~~ rated for ... and ...
b.2 Mass ~~capability of~~ from 0.9 to 23 kg;
b.3 ~~Capable of~~ balancing to a residual imbalance ...

2B230
"Pressure transducers" ~~capable of~~ rated for measuring ...

2B231
Related Controls: ... (2) Vacuum pumps ~~specially designed or prepared~~ as defined by NRC for
c ~~Capable of~~ Rated for producing an ultimate vacuum ....

2B232
Multistage light gas guns ... ~~capable of~~ rated for accelerating projectiles ...

2B290
Unit: Equipment in number~~; parts and accessories in $ value~~
a. Turning machines ... ~~capable of~~ rated for machining diameters ...

2B350
License Requirement Note: This ECCN does not control equipment that is both: (1) ~~Specially designed for use in~~ rated for civil applications... and (2) ~~inappropriate, by the nature of its design,~~ not "required" for storing, processing ... precursors controlled by 1C350
b Agitators ~~for use in~~ "required" for reaction vessels or reactors described in 2B350.a, ... and impellers, blades or shafts ~~designed~~ "required" for such agitators ...
d. Heat exchangers or condensers ... and tubes, plates, coils or blocks (cores) ~~designed~~ "required" for such heat

exchangers or condensers ...

e Distillation or absorption columns ...and liquid distributors, vapor distributors or liquid collectors ~~designed~~ "required" for such distillation or absorption columns, ...

g Valves ... and casings (valve bodies) or preformed casing liners ~~designed~~ "required" for such valves ...

i Multiple-seal and seal-less pumps with ~~manufacturer's specified~~ rated maximum flow-rate ... or vacuum pumps with ~~manufacturer's specified~~ rated maximum flow-rate ...and casings (pump bodies), preformed casing liners, impellers, rotors or jet pump nozzles ~~designed~~ "required" for such pumps ...

j Incinerators ~~designed~~ "required" to destroy "chemical warfare agents", chemical weapons precursors controlled by 1C350, or ~~chemical munitions having specially designed~~ waste supply systems~~,~~ "required" for chemical munitions or ~~special~~ handling facilities "required" therefor, ~~and~~ rated for an average combustion chamber temperature ...

2B351

Toxic gas monitoring systems, and ~~their dedicated~~ detecting components "required" therefor

Related Controls: ... Also see ECCN 1A004, which controls chemical detection systems and ~~specially designed~~ components ~~that are specially designed or modified~~ for detection or identification of chemical warfare agents~~, but not specially designed for military use~~

(1A004, rather than 2B351, should determine 1A004 wording.)

Related Definitions: ... (2) ... "continuous operation" ~~describes the capability of the equipment to operate~~ operating on line without human intervention. The intent of this entry is to control toxic gas monitor systems ~~capable of collection and detection of~~ which collect and detect samples ...

a ~~Designed~~ Rated for continuous operation and ~~usable~~ for the detection of chemical warfare agents or chemicals controlled by 1C350 at concentrations of less than 0.3mg/m^3

b ~~Designed~~ Rated for the detection of cholinesterase-inhibiting activity.

2B352

Equipment ~~capable of use in~~ "required" for handling biological materials, as follows:

Related Controls: ... "UAV" systems ~~designed or modified~~ to dispense an aerosol and ~~capable of~~ carrying elements of a payload ...

b. ... ~~capable of~~ rated for ...

c. ... ~~capable of~~ rated for ...

d.1. ... ~~capable of~~ rated for ...

d.2 Cross ... flow filtration components ... ~~designed for use in~~ cross ... flow filtration equipment

Technical Note: ..through ~~the use of~~ either physical ... or chemical agents. ... through ~~the use of~~ chemical agents

f.1 Technical Note: This entry does not control suits ~~designed~~ to be worn with self-contained breathing apparatus

g. Chambers ~~designed~~ "required" for aerosol challenge testing...

h.1 ... ~~specially designed or modified~~ "required" ...
h.2 ... ~~specially designed or modified~~ "required" ... ~~capable of delivering~~ rated to deliver
h.3 Aerosol generating units ~~specially designed for fitting to~~ "required" for the systems...
Technical Notes:
1. "Aerosol generating units" are devices ~~specially designed or modified~~ "required" for fitting to aircraft
2. This entry does not control spraying or fogging systems and components, as ~~specified~~ described in 2B352 ~~that are demonstrated not to be capable of~~ not "required" for delivering biological agents in the form of infectious aerosols ....
3. Droplet size for spray equipment or nozzles ~~specially designed for use on~~ "required" for aircraft or "UAVs" ...

2B991
a.1 ... axes ~~that can~~ rated to be coordinated simultaneously for "contouring control"
a.2 ... axes ~~that can~~ rated to be coordinated simultaneously for "contouring control"
a.3 ... axes ~~that can~~ rated to be coordinated simultaneously for "contouring control"
b ... ~~specially designed~~ "required" ...
b,2 ~~Capable of~~ Rated for
b.3 ~~Capable of~~ Rated for
c. ... ~~, according to the manufacturer's technical specifications, can be equipped with~~ rated for ...
c.1 Two or more axes ~~that can~~ rated to be coordinated simultaneously ...
d. ... ~~, according to the manufacturer's technical specifications, can be equipped with~~ rated for ...
d.1 ... having two or more axes ~~that can~~ rated to be coordinated simultaneously ...
d.2 ... have five or more axes ~~that can~~ rated to be coordinated simultaneously ...

2B992
... ~~specially designed~~ components "required" therefor

2B993
... machinery ... ~~capable of~~ rated for

2B997
"Robots"... ~~capable of~~ rated for

2B998
Assemblies, units or inserts ~~specially designed~~ "required" for machine tools
c ~~Specially designed~~ printed circuit boards with mounted components ~~capable of~~ "required" for upgrading ~~according to the manufacturer's technical specifications,~~ "numerical control" units, machine tools, or feedback devices ...

2B999
AT applies ... The Commerce Country Chart ~~is not designed to~~ does not determine AT licensing

requirements for this entry.

h.1 ... ~~capable of~~ rated for drilling holes greater than two feet in diameter

i Electroplating equipment ~~designed~~ "required" for ...

j Pumps ~~designed for industrial services and for use~~ with an electrical motor of 5 HP or greater

k Vacuum valves, piping, flanges, gaskets and related equipment ~~specially designed for use in~~ "required" for high-vacuum service, ~~n.e.s.~~

2D001

"Software"..~~.~~ ~~specially designed or modified~~ "required" for ...

NP applies to ~~specially designed or modified~~ "software" for ... and to ~~specially designed~~ "software" for ...

(Since both "specially designed or modified" and "specially designed" are proposed to be equated with "required," there would be no need to distinguish between NP software for 2B001 and NP software for 2B004, 2B007, or 2B009.)

STA: ... may not be used to ship or transmit "software" ... ~~specially designed~~ "required" for the development or production of equipment as follows: ...

2D002

"Software" ~~for electronic devices~~, even when residing in an electronic device or system, ~~enabling such devices or systems to function as a~~ "required" for "numerical control" unit, ~~capable of~~ rated for coordinating simultaneously more than 4 axes for "contouring control"

Note 1: 2D002 does not control "software" ~~specially designed or modified~~ for the operation of machine tools not controlled by Category 2

2D101

"Software" ~~specially designed or modified~~ "required" for ...

NP applies to "software" ~~specially designed~~ for the "use" of ...

2D201

"Software" ~~specially designed~~ "required" for ...

ECCN Controls: Software ~~specially designed~~ "required" for systems controlled by 2B206 includes ...

2D202

"Software" ~~specially designed or modified~~ "required" for ...

2D290

"Software"~~specially designed or modified~~ "required" for ...

2D351

~~Dedicated~~ "software" "required" for toxic gas monitoring systems and t~~heir dedicated~~ detecting components "required" therefor controlled by ECCN 2B351

Related Definitions: (1) ~~For the purpose of this entry, the term "dedicated" means committed entirely to a single purpose or device. (2)~~

2D983
"Software" ~~specially designed or modified~~ "required" for ...

2D984
"Software" "required" for ...

2D991
"Software" ~~specially designed~~ "required" for ...

2D992
a. "Software""required" to provide
a.2 ~~Capable of~~ Rated for generating or modifying ... ...
Note: 2D992,a does not control "software" ~~which only provides~~ rated only for rescheduling ...

2D994
"Software" ~~specially designed~~ "required" for ...
AT applies ... The Commerce Country Chart ~~is not designed~~ does not determine ...

2E001
Note: ECCN 2E001 includes ... integration of probe systems into ... machines ~~specified~~ controlled by 2B006.a.

2E003
Related Controls: See 2E001, 2E002, and 2E101 for ... technology for equipment ~~that are designed or modified~~ for densification ...
(2E003 should not determine wording for other ECCNs.)
a. "Technology" "required" for ...
b.1 "Technology" for the ~~design~~ "development" of tools, dies or fixtures ~~specially designed~~ "required" for any of the following processes:
c. "Technology" "required" for ...
d. "Technology" "required" for ...
e. "Technology" "required" for ...
f. "Technology" "required" for ...
Notes to Table on Deposition Techniques ...
17. "Technology" ~~specially designed~~ rated ... is not controlled ...

2E983
"Technology" ~~specially designed or modified~~ "required" ...

2E991
"Technology" "required" for the "use" of ...

2E994
"Technology" "required" for ...

EAR99
... ~~specified in~~ controlled by ...

Recapitulation

A. Specially designed

1. Limit controlled item to its controlled parameters (excluding components)
   - Change specially designed to "required" 2A291.b,c,e. 2B005, 2B006.b.1.d, 2B007. 2B007.b, 2B109, 2B116.b, 2B207a,.b, 2B226.b, 2B350.j, 2B352.h.3, 2B352 Technical Note 3, 2B991.b, 2B999.k, 2D001 STA, 2D201, 2D991, 2D994. 2E003.b.1
     - Change according to the manufacturer's specifications are specially designed to enable to rated 2A991.a.2, b.1
   - Delete specially designed 2A291.e, 2B007.c
   - Delete specially designed for military use 2B351 Related Controls
2. Limit controlled components referred to as components
   - Change specially designed to "required" 2B001, 2B003, 2B004, 2B005, 2B109.b, 2B992
   - Change specially designed parts to components "required" therefor 2A994
   - Delete specially designed components 2B001, 2B001.f, 2B109.b, 2B351 Related Controls
3. Limit controlled contained items not using the word component
   - Change specially designed to "required" 2B008, 2B352.h.3, 2B352.h.3 Technical Notes 1 and 3

4 Limit what is excepted from control
   - Change specially designed to rated (except clause) 2B001.a Note, 2B005 Related Controls, 2B007.b Note, 2B201.c Note c, 2B207 ECCN Controls, 2B350 License Requirement Note (1), 2E003 Note 17

B Specially designed or modified

1. Limit controlled item to its controlled parameters
   - Change specially designed or modified to "required" 2B122, 2B352.h.1,2, 2D001, 2D101, 2D202, 2D290, 2D983, 2E983
   - Change specially designed or modified for military purposes to as defined in the USML 2A291 Related Controls (5)
   - Delete specially designed or modified 2B351 Related Controls, 2D001 NP applies
4. Limit what is excepted from control
   - Delete specially designed or modified 2D002 Note 1

C. Specially designed or prepared

1. Limit controlled item to the controlled parameters
   - Change specially designed or prepared to as defined by NRC 2A291 Related Controls (4), 2A292 Related Controls, 2B225 Related Controls, 2B231 Related Controls
   - Change specially designed, prepared, or intended for use with to as defined by NRC 2A290

Change specially designed or prepared for use with to as defined by NRC for 2A291.d

D Designed or modified

1. <u>Limit controlled item to its controlled parameters</u>

Change designed or modified to "required" 2B105, 2B117

Change designed or modified for use with to rated for 2B119.b

Change designed or modified to rated 2B120.b

Delete designed or modified 2B005 Related Controls (3), 2B352 Related Controls, 2E003 Related Controls

4. <u>Limit what is excepted from control</u>

Change designed or modified to rated 2B119.a Note, 2B120 Note, 2B121 Note

E. Usable in or capable of

1. Limit controlled item to the controlled parameters

Change capable of to "required" 2B352.h.3 Technical Note 2

Change intended for use with to "required" for 2A290.b, 2A291.a

Change usable to "required" 2B109 Technical Note 2, 2B116

Change can be used to "required" 2B225

Change a capability of to "required" 2B225.a,b

Change for use in to "required" for 2B350.b

Change capable of use to "required" 2B352

Change capable of to rated for 2B005.e,g, 2B006.b.1.c.2.b, 2B007.a, 2B009 NP applies, 2B116.a,c,d, 2B119.a.2, a.3, a.4, 2B120, 2B120.c.1.a, 2B121, 2B122 2x. 2B209, 2B226.a.1, 2B227.a.2, b.2, 2B231.c, 2B232, 2B290.a, 2B352.b,c, d.1, g, h.2, 2B991.b.2,3, 2B993, 2B997, 2B991.h.1, 2D002, 2D992.a.2

Change capable of upgrading, according to the manufacturer's specifications to rated 2B008.c

Change capable of achieving to rated for 2B116, 2B230

Change capability to rated 2B001 Note 3, 2B201.a Note

Change can to rated 2B001.a.2, b.2, c.1.b, c.2, c.2.a, 2B002.c , 2B006 Note, 2B009.a, 2B206 ECCN Controls, 2B991.a.1, a.2, a.3,c.1, d.1, d.2

Change suitable to rated 2A292.a

Change manufactured for use at to rated for 2A991.a.1

Change that have to rated for 2B201.a

Change having and limited to using to rated 2B001.a Note

Delete capable of 2B229.a.3, b.3, 2B351 Related Definitions, 2B352 Related Controls, 2D002

Delete capability 2B001 NP applies (2), 2B006.b.1.d, 2B229.a.2, 2B229.b.2, 2B351 Related Definitions

Delete capabilities 2B001 Note 3

Delete capacity 2B002 NP applies (1)

Delete can 2B991.c.1, d.1,2

Delete usable 2B351.a

Delete use 2B352.d.2 Technical Note (2x), 2D001 NP applies

3. Limit controlled contained items not using the word components

Change capable of to "required" 2B352.h.3 Technical Note 2

Change capable of and according to the manufacturer's technical specifications to "required" (printed circuit boards for "numerical control" units, machine tools, or feedback devices) 2B998.c

Change usable to required 2B116.c,d,

4. Limit what is excepted from control

Change capable of to rated for 2B119.a.1

F. **Designed**

1. Limit controlled item to the controlled parameters

Change designed to "required" 2B116.b,d, 2B209.b, 2B350.j, 2B352.d,2, 2B352.g, 2B999.i,

Change designed or intended for use in to "required" for 2A290.a

Change designed to rated 2A293, 2B007.d, 2B226, 2B226.a.3, 2B229.a, 2B229.b, 2B351.a,b

Delete designed 2A999 AT applies, B Technical Notes 2.b, 2.c, 2B006.b.1, 2B104.b, 2B991 AT applies, 2B999.j

3. Limit controlled contained items not using the word components

Change designed to "required" (impellers, blades, or shafts for agitators) 2B350.b

Change designed to "required" (tubes, plates, coils or blocks (cores) for heat exchangers or condensers) 2B350.d

Change designed to "required" (liquid distributors, vapor distributors or liquid collectors for distillation or absorption columns) 2B350.e

Change designed to "required" (casings (valve bodies) or preformed casing liners for valves 2B350.g

Change designed to "required" (casings (pump bodies), preformed casing liners, impellers, rotors or jet pump nozzles for multiple-seal and seal-less pumps) 2B350.i

4 Limit what is excepted from control

Change inappropriate, by the nature of its design to not "required" 2B350 License Requirement Note (2)

Change designed specifically as to rated for 2B001.a Note b

Change designed to use to rated for 2B006.b.1 Note

Delete designed 2B352.f.1

G **Miscellaneous expressions**

1. Limit controlled item to the controlled parameters

Change related to to "required" for 2A291

Change specially configured to “required” 2B227.c
Change dedicated to “required: 2D351
Change according to the manufacturer’s technical specifications can to rated for 2B001, 2B009, 2B109.a.1,, 2B201, 2B209.a.2, 2B991.c,d
Change manufacturer’s specified to rated 2B350.i 2x
Change manufactured for use at to rated for 2A991.b.2, c, e
Change design to development 2E003.b.1
Change specified to controlled 2E001 Note, EAR99
Delete design 2A987 Related Controls,
Delete specific 2A999
Delete possessing 2B104.c
Delete dedicated 2D351 Related Controls

2. Limit controlled components referred to as components
Change dedicated to “required” (components) 2B351, 2D351

3. Limit controlled contained items not using the word components
Change special to “required” (handling facilities for incinerators or waste supply systems) 2B350.j
Delete parts 2A292 Unit, 2A983, 2A984
Delete accessories 2A292 Unit

4. Limit what is excepted from control
Change limited to to rated for 2B001.a Note a, a.1, a.2, 2B201.a Note
Change special purpose limited to to rated for 2B001 Notes 1, 2
Change which only provides to rated to provide 2D992.a Note

H **Replace absence of any expression**

1. Limit controlled item to the controlled parameters
Add “required” 2A226 Related Controls, 2A293 Related Controls, 2A999 Related Controls, 2B228 Related Controls, 2B229 Related Controls, 2B999 Related Controls, 2D002, 2D984, 2D992.a, 2D101 NP applies, 2E003.a, b.1, c,d,e, 2E991
Add rated 2B350.j

2. Limit controlled components referred to as components
Add “required” 2A983, 2A984, 2A994, 2B116

3. Limit controlled contained items not using the word components
Add “required” (for subsystems) 2B116

July 17, 2012

Specially Designed Issues CCL Category 3

A.
Note 1: The control status of equipment and components described in 3A001 or 3A002 other than ... ~~which are specially designed for or~~ whieh have the same functional characteristics as other equipment is determined by the control status of the other equipment.
Note 2: The control status of integrated circuits described in 3A001 ... that are unalterably programmed ~~or designed for a specific function~~ for other equipment is deetermined by the control status of the other equipment.

3A001
Electronic components ~~and specially designed components therefor~~, as follows ...
MT applies to 3A001.a.1.a ~~when usable in~~ "required " for "missiles"; and to 3A001.a.5.a ~~when "designed or modified" for military use, hermetically sealed and rated for operations in the temperature range from below -54°C to above + 125°C~~ also described in 3A101.a.
Related Controls: ... (2) The following commodities are also under the export licensing authority of the Department of State ...(c) ~~All specifically designed or modified systems or subsystems, components, parts, accessories, attachments, and associated equipment~~ items controlled by Category XV(e) of the USML.....

a.1 Integrated circuits ~~designed or~~ rated as radiation hardened ...
a.2 ... ~~designed~~ rated for "signal processing"
a.5.a.5 Technical Note 8: 'Multiple channel ADCs' ... ~~designed so that~~ each ADC ~~has~~ having a separate analog input.
a.6 ... ~~designed~~ rated for "signal processing"
b.1 Note 1 3A001.b.1 does not control tubes ~~designed or~~ rated for operation ...
Note 2 3A001.b.1 does not control ...
(b) ~~Designed or~~ rated ...
b.1.c Impregnated cathodes ~~designed~~ rated for ...
b.2 Note 3. ... 3A001.b.2 does not control MMICs if they are ~~specially designed~~ rated for ...
b.7 Converters and harmonic mixers, ~~designed~~ rated to ...
b.8 Note: 3A001.b.8 does not control equipment ~~designed or~~ rated for ...
b.10 Oscillators or oscillator assemblies, ~~specified~~ rated to ...
c Acoustic wave devices as follws and ~~specially designed~~ components "required" therefor
Note: 3A001.c does not control acoustic wave devices ~~that are limited to~~ rated for ...
d Electronic devices and circuits containing components, manufactured from "superconductive" materials ~~specially designed~~ rated for ...
Technical Note 3. ... a 'primary cell' is a 'cell' that is not ~~designed~~ rated to be charged by any other source.
Technical Note 4. ... a 'secondary cell' is a 'cell' that is ~~designed~~ rated to be charged by an external electrical source.
e.3 "Superconductive" electromagnets and solenoids ~~specially designed~~ rated to ...
Note: 3A001.e.3 does not control "superconductive" electromagnets or solenoids

~~specially designed~~ rated for ...

g Note 2: 3A001.g does not control ... equipment ~~designed~~ rated for ...

h Note 3: 3A001.h does not apply to ... equipment ~~designed~~ rated for ...

3A002

General purpose electronic equipment ~~and accessories, therefor~~ ...

CIV (3) They are not ~~designed~~ rated for underwater use.

a ... and ~~specially designed~~ test tape "required" therefor

a.1 Note: Analog magnetic tape recorders ~~specially designed~~ rated for civilian video purposes are not considered to be instrumentation tape recorders.

a.2 Note: 3A002.a.2 does not control ... recorders ~~specially designed~~ rated for ...

a.4 ... ~~designed~~ rated to convert ...

d Technical Note 1 ... normally ~~specified~~ rated by sample rate

f.2 ~~Being capable of~~ Rated for ...

3A003

... systems ... ~~using specially designed~~ with spray nozzles ~~that are designed~~ rated to ... and ~~specially designed~~ components "required" therefor

3A101

a. Analog-to-digital converters, ~~usable in~~ "required" for ..."missiles", ~~designed to meet military specifications~~ rated for ...

b Accelerators ~~capable of~~ rated for ...

Note: 3A101.b does not ~~include~~ control equipment ~~specially designed~~ rated for ...

3A201

Related Controls: ... (3) ... ~~specially designed or prepared~~ as defined by NRC for

b.1 ~~Capable of~~ Rated for ...

Note: 3A201.b does not control magnets ~~specially designed~~ rated for ...

c Note: 3A201.c does not control accelerators that are ~~component parts~~ components of devices ~~designed~~ rated for ... nor those ~~designed~~ rated for medical purposes.

3A225

Related Controls: ... (2) ... ~~specially designed or prepared for use in~~ as defined by NRC for ...

a. A multiphase output ~~capable of~~ rated for providing power ...

b ~~Capable of~~ Rated for operating ...

3A226

Related Controls: ... (3) ... ~~specially designed or prepared for use in~~ as defined by NRC for

... a ~~Capable of~~ Rated for ...

3A227

Related Controls: ... (3) ... ~~specially designed or prepared for use in~~ as defined by NRC for ...

a ~~Capable of~~ Rated for ...

3A229

a Explosive detonator firing sets ~~designed~~ rated to ...

b.1 ~~Designed~~ Rated for ...

b.3 ~~Capable of~~ Rated for ...

b.8 ~~Specified for use~~ Rated to operate ... or ~~specified as suitable~~ rated for ...

3A231

Unit: Number~~; parts and accessories in $ value~~

a ~~Designed~~ Rated for operation ...

3A232

Related Controls: ... (3) High explosives and ~~related~~ equipment ~~for military use~~ controlled by USML Category V(a) are subject to the export licensing authority of the U.S. Department of State ...

b ~~Arrangements using~~ single or multiple detonators ~~designed~~ "required" to ...

3A233

Mass spectrometers ... ~~capable of~~ rated for ... and ion sources "required" therefor. ...

Related Controls: ... (2) Mass spectrometers ~~specially designed or prepared~~ as defined by NRC for

f Mass spectrometers equipped with a microfluorination ion source ~~designed~~ rated for ...

3A292

... and ~~speciaally designed~~ components "required" therefor ...

d ... ~~capable of~~ rated for storing ...

Note: ~~Specially designed~~ components controlled by this item are the following, when "required" for ...

3A980

Voice print identification and analysis equipment and ~~parts, n.e.s.~~ components "required" therefor

3A981

Polygraphs ... and ~~specially designed parts and accessories, n.e.s.~~ components "required" therefor

3A991

k "Superconductive" electromagnets or solenoids ~~specially designed~~ rated to ...be fully charged or discharged in less than one minute ...

l Circuits or systems for electromagnetic energy storage, containing components manufactured from "superconductive" materials ~~specially designed~~ rated for operation at temperatures ...

3A992

c Equipment, ..., ~~designed~~ rated to convert digital video magnetic tape recorders ~~for use as~~ to digital instrumentation data recorders

3A999

Related Controls:... frequency ~~changes capable of~~ changers rated for operating ...

a Frequency changers ~~capable of~~ rated for operating ...

c All flash x-ray machines, and components of pulsed power systems ~~designed thereof~~ rated therefor, ...

3B001

... and ~~specially designed~~ components ~~and accessories~~ "required" therefor.

a Equipment ~~designed~~ rated for epitaxial growth, as follows;

a.1 Equipment ~~capable of~~ rated for ...

a.2 ... reactors ~~specially designed~~ "required" for

b Equipment ~~designed~~ "required" for ion implantation ...

b.2 ~~Being specially designed and optimized~~ "Required" to operate at a beam energy ...

b.3 Direct write ~~capability~~

c.1.a ~~Designed or optimized~~ Rated to produce critical dimensions ...

c.1.b ~~Designed~~ Rated for generating less than ...

c.2 Equipment ~~specially designed~~ "required" for equipment controlled by 3B001.a ...

c.2.a ~~Designed or optimized~~ Rated to produce critical dimensions ...

c.2.b ~~Designed~~ Rated for generating less than ...

d.1 Equipment ... and ~~designed accorrding to the manufacturer's specifications or optimized for use in~~ rated for the production of ...

d.2 Equipment ~~specially designed~~ "required" for equipment controlled by 3B001.e ...

e.2 ~~Designed~~ Rated to form ...

Note: 3B001.e does not control automatic robotic wafer handling systems not ~~designed~~ rated to operate in a vacuum environment.

f.1.b ~~Capable of~~ Rated for producing a pattern ...

f.3 Equipment ~~specially designed~~ "required" for mask making ...

f.3.b.2 ~~Being capable of~~ Rated for producing a pattern ...

g Masks and reticles, ~~designed~~ rated for integrated circuits controlled by 3A001.

h Note: 3B001.h does not control multi-layer masks with a phase shift layer ~~designed~~ rated for the fabrication of memory devices ...

i Imprint lithography templates ~~designed~~ rated for integrated circuits controlled by 3A001

3B002

Test equipment ~~specially designed~~ "required" for testing finished or unfinished semiconductor devices as follows ... and ~~specially designed~~ components ~~and accessories~~ "required" therefor

3B991

... and ~~specially designed~~ components ~~and accessories~~ "required" therefor

Unit: ... ~~and accessories~~ ...

a. Equipment ~~specially designed~~ "required" for the manufacture of electron tubes, optical elements and ~~specially designed~~ components therefor controlled by 3A001 or 3A991

b Equipment ~~specially designed~~ "required" for the manufacture of semiconductor devices ...

Note: 3B991.b also controls equipment ~~used or modified for use in~~ "required" for ...

b.1 Note: 3B991 does not control ... boats (except ~~specially designed~~ "required" caged boats), bubblers, cassettes, or crucibles ~~specially designed~~ for the processing equipment controlled by 3B991,b,1.

b.1.b Equipment ~~specially designed~~ "required" for purifying or processing ...

b.1.c.1 ... ~~capable of~~ rated for processing wafers at a rate ...

b.1.c.2.b ~~Capable of~~ Rated for operation at ...

b.1.c.2.c ~~Capable of~~ Rated for pulling crystals ...

b.1.d.1 ~~Capable of~~ Rated for producing a silicon wafer ...

b.1.d.2 ~~Capable of~~ Rated for producing a layer of ...

b.1.f ... "sputtering equipment with ~~specially designed~~ integral load locks ~~capable of~~ "required" for transferring wafers ...

b.1.g Equipment ~~specially designed~~ "required" for ion implantation ...

b.1.g.1 Patterning ~~capability~~

b.1.g.3 ~~Optimized~~ Rated to operate

b.1.g.4 ~~Capable of~~ Rated for high energy oxygen implant

Notes

1. "Batch types" refers to machines not ~~specially designed~~ rated for production processing of single wafers.
2. "Single wafer types" refers to machines ~~specially designed~~ rated for production processing of single wafers.

b.1.i ... ~~capabilities~~ characteristics ...

b.1.j ... ~~specially designed or modified~~ "required" ...

b.1.k.1 ~~Specially designed~~ equipment "required" for backside processing ...

b.1.k.2 ~~Specially designed~~ equipment "required" for achieving ...

b.1.l ~~specially designed~~ "required" to permit ...

b.2.a.2.a ~~Their design is based on~~ Rated for geometries ..

b.2.a.2.b ~~The design does not include special features to alter the intended use by~~ Not rated to alter the means of production equipment or "software"

b.2.b.2 "Substrates" ~~specially designed~~ "required" for X-ray masks;

b.2.c ... ~~specially designed~~ "required" for computer aided design ...

b.2.d.1 ... ~~capable of~~ rated for producing a single exposure ...

b.2.d.2 ... ~~capable of~~ rated for producing ...

b.2.e Note: 3B991.b.2.e does not control ~~general purpose~~ scanning electron microscopes except when ~~specially designed~~ "required" and instrumented for automatic pattern inspection ...

b.2.f ... ~~capable of~~ rated for ...

b.2.g ... ~~capable of~~ rated for ...

b.2.h ... ~~capable of~~ rated for ...

b.3.a.1 ~~Specially designed~~ "required" for "hybrid integrated circuits"

b.3.c ... ~~specially designed~~ "required" for ceramic microcircuit packages ..
b.4 ... ~~capable of~~ rated for ...

3B992
Equipment ~~specially designed~~ "required" for the inspection or testing ... and ~~specially designed~~ components ~~and accessories~~ "required" therefor
a Equipment ~~specially designed~~ "required" for the inspection ... ~~and specially designed components therefor controlled by 3A001 or 3A991~~
(Components controlled in other ECCNs do not needed to be controlled by 3B992.)
b Equipment ~~specially designed~~ "required" for the inspection ...
Note: 3B991.b ...controls equipment ~~used or modified for use in~~ "required" for ... .
b.1 Note: 3B992.b.1 does not control ~~general purpose~~ scanning electron microscopes, except when ~~specially designed~~ "required" and instrumented for automatic pattern inspection.
b.2 ~~Specially designed~~ "stored program controlled" measuring and analysis equipment~~, as follows~~ "required" for the following:
b.2.a ~~Specially designed for the~~ measurement of oxygen or carbon content ...
("Required" in b.2 does not need to be repeated in b.2.a.)
b.2.c ~~Specially designed for~~ flatness measurement ...
("Required" in b.2 does not need to be repeated in b.2.c.)
b.3.b ~~Capable of~~ Rated for testing devices having ... ...
b.3.c ~~Capable of~~ Rated for testing at ...
b.4.a ... equipment ~~specially designed~~ "required" ...and ... dice, ~~capable of~~ rated for ...
b.4.b ... equipment ~~specially designed~~ "required" ... and "electronic assemblies" thereof, ~~capable of~~ rated for ...
b.4.b.2 ... ~~capable of~~ rated for testing packages...
Note: 3B992.b does not control test equipment ~~specially designed~~ rated for ...:
b.4.c Equipment ~~specially designed~~ "required" ...
b.4.c.2 ~~Designed~~ Rated for measuring ...
b.4.c.3 ~~Designed~~ Rated for evaluating ...
b.5 Electron beam test systems ~~designed~~ rated for ...
b.5.a Stroboscopic ~~capability~~ with ...
Note: 3B992.b.5 does not control scanning electron microscopes, except when ~~specially designed~~ "required" and instrumented for
b.6 ... ion beam systems ~~specially designed~~ "required" for ...
b.7 Particle measuring systems employing "lasers" ~~designed~~ rated for ...
b.7.a ~~Capable of~~ Rated for measuring ...
b.7.b ~~Capable of~~ Rated for characterizing ...

3C002
GBS: Yes for positive resists not ~~optimized~~ for photolithography at a wavelength of less than 365 nm, provided that they are not controlled by 3C002.b through .e.
CIV: Yes for positive resists not ~~optimized~~ for photolithography at a wavelength of less than 365 nm, provided that they are not controlled by 3C002.b through .e.

a Positive resists ~~designed~~ "required" for semiconductor lithography ~~specially adjusted (optimized) for use~~ at wavelengths below 245 nm.
b ... resists ~~designed for use with~~ "required" for electron beams or ion beams, with
c ... resists ~~designed for use with~~ "required" for X-rays, with ...
d ... resists ~~optimized~~ "required" for surface imaging ...
e ... resists ~~designed or optimized for use with~~ "required" for imprint lithography

3C992
Positive resists ~~designed~~ "required" for semiconductor lithography ~~specially adjusted (optimized) for use~~ at wavelengths between 370 and 245 nm.

3D001
"Software" ~~specially designed~~ "required" for ...
TSR: ... ~~specially designed~~ "required" ...
STA: ... ~~specially designed~~ "required" ...
Related Controls:"Software"~~specially designed~~ also described in the USML ...

3D002
"Software" ~~specially designed~~ "required" ...

3D003
'Physics-based' simulation "software" ~~specially designed~~ "required" for ...

3D004
"Software" ~~specially designed~~ "required" for ...

3D101
"Software" ~~specially designed or modified~~ "required" for ...

3D980
"Software" ~~specially designed~~ "required" for ...

3D982
"Software: ~~specially designed~~ "required" for ...

3D991
"Software" ~~specially designed~~ "required" for the "development", "preoduction", or "use" of ... or "software" ~~specially designed~~ "required" for the "use" of ...

3E001
TSR: Yes except N/A for ... "technology" ~~specially designed~~ "required" for ...

3E002
CIV: ... License Exception CIV does not apply to ECCN 3E002 technology also ~~required~~

“required” for ...
a. A ‘vector processor unit’ ~~designed~~ rated to perform ...
b ~~Designed~~ Rated to perform
c ~~Designed~~ Rated to perform ...

3E003
Other “technology” “required” for ...
3E980
“Technology” ~~specially designed~~ “required” for ...

3E991
“Technology”“required” for ...

EAR99
... ~~specified in~~ controlled by ...

Recapitulation

A. Specially designed

1. Limit controlled item to its controlled parameters (excluding components)
   - Change specially designed to "required" 3A001.c, 3B001.a.2, c.2, f.3, 3B002, 3B991.a, b, b Note, b.1.b, b.1.g, b.1.k.1, b.1.k.2, b.1.l, b.2.b.2, b.2.c, b.2.c Note, b.3.a.1, b.3.c, 3B992, 3B992.a, b, b.1 Note, b.2, b.4.a, b.4.b, b.4.c, b.5 Note, b.6, 3D001, 3D001 TSR, 3D001 STA, 3D002, 3D003, 3D004, 3D980, 3D982, 3D991 2x, 3E001 TSR, 3E980.
   - Change being specially designed and optimized to "required" 3B001.b.2
   - Change specially designed and capable of to "required" 3B991.b.1.f
   - Change specially designed to rated 3A001.d, e.3., 3A991.k, l, 3B991.b.1.h.1 Note 1, b.1.h.2 Note 2
     - Delete specially designed 3B992.b.2.a, b.2.c, 3D001 Related Controls
2. Limit controlled components referred to as components
   - Change specially designed to "required" 3A001.c, 3A003, 3A292, 3A292 Note, 3A981, 3B001, 3B002, 3B991, 3B992
     - Delete specially designed 3A001, 3B991.a, 3B992.a
3. Limit controlled contained items not using the word components
   - Change specially designed to "required" (test tape for recorders) 3A002.a
   - Delete specially designed (nozzles of cooling systems) 3A003
4. Limit what is excepted from control
   - Change specially designed to rated 3A001.b.2 Note 3, e.3 Note, 3A002.a.1 Note, a.2 Note,.3A101.b Note, 3A201.b Note, 3B992.b Note
   - Delete specially designed 3A Note 1, 3B991.b.1 Note

B Specially designed or modified

1. Limit controlled item to its controlled parameters (excluding components)
   - Change specially designed or modified to "required" 3B991.b.1.j, 3D101
2. Limit controlled components referred to as components
   - Delete specifically designed or modified 3A001 Related Controls
3. Limit controlled contained items not using the word components
   - Delete specifically designed or modified 3A001 Related Controls

C. Specially designed or prepared

1. Limit controlled item to its controlled parameters (excluding components)
   - Change specially designed or prepared to "required" 3A201 Related Controls, 3A233 Related Controls
   - Change specially designed or prepared for use in to "required" for 3A225 Related Controls, 3A226 Related Controls, 3A227 Related Controls

D Designed or modified

1. Limit controlled item to its controlled parameters (excluding components)

Delete “designed or modified” for military use 3A001 MT applies

E. Usable in or capable of

1. Limit controlled item to its controlled parameters (excluding components)

Change when usable in to “required” for 3A001 MT applies

Change used or modified for use in to “required” 3B991.b.1 Note, 3B992.b Note

Change capable of to rated for 3A002.f.2, 3A101.b**,** 3A201.b.1, 3A225.a, b, 3A226.a, 3A227.a, 3A229.b.3. 3A233, 3A233.e.1, 3A292.d, 3A999 Related Controls, 3A999.a, 3B001.a.1, f.1.b, f.3.b.2, 3B991.b.1.c.1, b.1.c.2.b, b.1.c.2.c, b.1.d.1, b.1.d.2, b.1.g.4, b.2.d.1, b.2.d.2, b.2.f, b.2.g, b.2.h, b.4, 3B992.b.3.b, b.3.c, b.4.a, b.4.b, b.4.b.2, b.7.a, b.7.b

Change specified for use to rated to operate 3A229.b.8

Change capabilities to characteristics 3B991.b.1.i

Change used or modified for use in to “required” 3B991.b.1 Note

Delete for military use 3A232 Related Controls

Delete arrangements using 3A232.b

Delete for use as 3A992**.**c

Delete capability 3B001.b.3, 3B991.b.1.g.1, 3B992.b.5.a

Delete specially adjusted (optimized) for use 3C002.a, 3C992

3. Limit controlled contained items not using the word components

Change usable in to “required” for (analog-to-digital converters in “missiles”) 3A101.a

F. Designed

1. Limit controlled item to its controlled parameters (excluding components)

Change designed to “required” 3A002 CIV, 3A232,b,3B001.b, 3C002.a, 3C992

Change designed for use with to “required” for 3C002.b, c

Change designed or optimized for use with to “required” 3C002.e

Change designed to rated 3A001.a.2, a.6, b.1.c, b.7, e.1.a Technical Note 3, e.1.b Technical Note 4, 3A002.a.4, 3A003, 3A229.a, b.1, 3A231.a , 3A233.f, 3A992.c, 3B001.a, c.1.b, c.2.b, e.2, g, k, 3B992.b.4.c.2, b.4.c.3, b.5, b.7, 3E002.a, b, c

Change designed to meet military specifications to rated 3A101.a

Change designed or optimized to rated 3B001.c.1.a, c.2.a

Change their design is based on to rated 3B991.b.2.a.2.a

Change design does not to not rated 3B991.b.2.a.2.b

Delete designed 3A001.a.1, 3A001.a.5.a.5 Technical Note 8.

Delete designed to be 3B001.e.2

2. Limit controlled components referred to as components

Change designed thereof to rated therefor 3A999.c

4. Limit what is excepted from control

Change designed to rated 3A001.g Note 2, h Note 3, 3A201.c Note 2x, 3B001.e Note, 3B001.h Note

Delete designed 3A Note 2 3A001.b.1 Note 1, b.1 Note 2(b), b.4 Note 1, b.8 Note

G Miscellaneous expressions

1. Limit controlled item to its controlled parameters (excluding components)

Change optimized to "required" 3C002.d

Change required to "required" 3E002 CIV

Change optimized to rated 3B991.b.1.g.3

Change specified to rated 3A001.b.10, 3A002 Technical Note 1

Change specified to controlled EAR99

3. Limit controlled contained items not using the word components

Change parts and accessories, n.e.s. to components therefor 3A981

Change parts, n.e.s. to components 3A980

Change component parts to components (accelerators in medical devices) 3A201.c Note

Delete accessories 3A002, 3B001, 3B002, 3B991, 3B991 Unit, 3B992

Delete parts and accessories 3A231 Unit

4. Limit what is excepted from control

Change limited to to rated for 3A001.c Note

Change specified as suitable to rated 3A229.b.8

Delete general purpose 3B991.b.2.e Note, 3B992.b.1 Note

Delete optimized 3C002 GBS, 3C002 CIV

H **Replace absence of any expression**

1. Limit controlled item to its controlled parameters (excluding components)

Add "required" 3E003, 3E991

3. Limit controlled contained items not using the word components

Add "required" (ion sources for mass spectrometers) 3A233, 3A980

July 17, 2012

Specially Designed Issues CCL Category 4

4

Note 2 N.B. For the control status of "software" ~~specially designed~~ for packet switching see ECCN 5D001

4A001

Electronic computers and ~~related equipment~~ components "required" therefor , having any of the following (see List of Items Controlled).~~and "electronic assemblies" and specially designed components therefor~~.

Unit: Computers ~~and related equipment~~ in number; ~~"electronic assemblies" and~~ components in $ value

Related Controls .... See Category 5 Part 2 for electronic computers and ~~related equipment~~ components performing "information security" as the primary function. Equipment ~~designed or rated~~ "required" for transient ionizing radiation is subject to the export licensing authority of the U.S, Department of State ...

a. ~~Specially designed~~ Rated to have any of the following:

a.1 ~~Rated for~~ operation at an ambient temperature ...

Note: 4A001.a.1 does not apply to computers or components ~~specially designed~~ rated for civil automobile or civil railway train or rated or certified for "civil aircraft" applications...

a.2 Note: 4A001.a.2 does not apply to computers or components ~~specially designed~~ rated or certified for "civil aircraft" applications.

4A003

"Digital computers", and "electronic assemblies", ~~and~~ related equipment, and components therefor, as follows (see List of Items Controlled)~~, and specially designed components therefor~~

~~CC applies to "digital computers" for computerized fingerprint equipment — CC Column 1~~

Related Controls: ... "electronic assemblies" described in 4A003.c that ~~are not capable of exceeding~~ do not exceed ...

GBS: ... ~~specially designed~~ components "required" therefor, ...

Note 2 N.B.1 The control status of "signal processing" or "image enhancement" equipment ~~specially designed~~ for other equipment ~~with functions limited to those required for the other equipment~~ described in an ECCN numbered xx0xx is determined by the control status of the other equipment even if it exceeds the "principal element" criterion.

(This Wassenaar N.B. refers to other equipment controlled by Wassenaar. It is irrelevant whether controlled equipment also has functions for non-controlled equipment.)

c "Electron assemblies" ~~specially designed or modified to be capable of~~ enhancing performance by aggregation of processors so that the "APP" of the aggregation exceeds the limit in 4A003.b;

Note 1. 4A003.c ... does not apply to "electronic assemblies" ~~inherently limited by nature of their design for use as~~ "required" for related equipment controlled by 4A003.e

Note 2: 4A003.c does not control "electronic assemblies" ~~specially designed~~ rated for a product or family of products whose maximum configuration does not exceed the limit of 4A003.b.

g Equipment ~~specially designed~~ "required" for aggregating the performance of "digital computers" by providing external interconnections which allow ...

4A004

Computers, as follows (see List of Items Controlled) ~~and specially designed related equipment, "electronic assemblies", and components therefor~~

Unit: Computers ~~and related equipment~~ in number~~; "electronic assemblies" and components in $ value.~~

4A101

... ~~designed or modified for use in~~ "required" for "missiles"...

b ~~Designed~~ Rated as ruggedized or 'radiation hardened'.

Note: 'Radiation hardened' means ~~that the component or equipment is designed or rated to withstand withstanding~~ radiation levels which meet or exceed ...

4A102

"Hybrid computers" ~~specially designed~~ "required" for ...

4A980

Computers "required" for fingerprint equipment~~, n.e.s.~~

Note: 4A980 does not control equipment limited to one finger and ~~designed~~ rated for user authentication or access control

4A994

Computers, "electronic assemblies", ~~and~~ related equipment, ~~not controlled by 4A001 or 4A003~~ and ~~specially designed~~ other components ~~therefor~~ n.e.s., as follows (see List of Items Controlled)

Unit: ~~Equipment~~ Computers and related equipment in number; ~~parts and accessories~~ "electronic assemblies and other components in $ value.

Note 1: The control status of "digital computers", ~~and~~ related equipment, and components described in 4A994 is determined by the control status of other equipment ~~or systems~~ controlled by an ECCN numbered xx0xx provided:

a. The "digital computers", ~~or~~ related equipment , or components are ~~essential~~ "required" for the operation of the other equipment ~~or systems~~;

b. The "digital computers", ~~or~~ related equipment , or components are not a "principal element" of the other equipment ~~or systems~~; and

N.B. 1: The control status of "signal processing" or "image enhancement" equipment ~~specially designed~~ for other equipment with functions limited to those ~~required~~ "required" for the other equipment is determined by the control status of the other equipment even if it exceeds the "principal element" criterion.

N.B. 2: For the control status of "digital computers", ~~or~~ related equipment , or components for telecommunicaitions equipment see Category 5, Part 1 (Telecommunications).

c. The "technology" for the "digital computers" and related equipment is determined by 4E.

Items:

a Electronic computers and related equipment, and "electronic assemblies" and ~~specially designed~~ components "required" therefor, rated for operation at an ambient temperature above 343 K (70°C)

c “Electronic assemblies” ~~specially designed or modified~~ rated to enhance performance by aggregation of processors, as follows:...

c.1 ~~Designed to be capable of~~ Rated for aggregation ...

Note 2: 4A994.c does not control any “electronic assembly” ~~specially designed~~ rated for a product or family of products whose maximum configuration does not exceed the limits of 4A994.b

j Equipment ~~specially designed~~ “required” to provide ...

k “Hybrid computers” and “electronic assemblies” and ~~specially designed~~ components “required” therefor ...

4D001

STA: ... may not be used to ship or transmit “software” ~~specially designed~~ “required” for ... equipment ~~specified~~ controlled by ECCN 4A001.a.2 for ...

a “Software” ~~specially designed or modified~~ “required” for ...

b “Software” .... ~~specially designed or modified~~ “required” for ...

b.2 “Electronic assemblies” ~~specially designed or modified~~ “required” for:

4D002

“Software” ~~specially designed or modified~~ “required” to support “technology” ...

TSR: Yes, except N/A for “software” ~~specifically designed or modified~~ “required” to support “technology” for computers requiring a license.

4D980

“Software” ~~specially designed~~ “required” for ...

4D993

... that are ~~specially designed~~ “required” for real time processing equipment ...

a ... ~~and designed or modified~~ “required” for ...

c Operating system “software” ~~specially designed~~ “required” for ...

4D994

“Software” ... ~~specially designed or modified~~ “required” for ...

4E001

b “Technology” ... ~~specially designed or modified~~ “required” for ...

b.2 “Electronic assemblies” ~~specially designed or modified~~ “required” for ...

4E980

“Technology” “required” for ... 4A980

4E992

“Technology” ... “required” for ...

4E993

“Technology”“required” for the “development” or “production” of equipment ~~designed~~ “required” for “multi-data-stream processing”

.
EAR99
... ~~specified in~~ controlled by ...

Technical Note on APP
Note 6 “APP” values must be calculated for (1) processor combinations containing processors ~~specially designed to enhance~~ enhancing performance by aggregation, operating simultaneously and sharing memory; or (2) multiple memory/processor combinations operating simultaneously utilizing ~~specially designed~~ hardware.

Recapitulation

A. Specially designed

1. Limit controlled item to its controlled parameters (excluding components)

Change specially designed to "required" 4A003 GBS, 4A003.g, 4A102, 4A994.j,k, 4D001 STA, 4D980, 4D993, 4D993.c

Change specially designed to rated 4A001.a, 4A003.c Note 2

Change specially designed to rated or certified 4A001.a.2

Delete specially designed 4 Note 2 N.B., 4A001.a.1, 4A003, 4A004, 4A994, 4A994 Note 1.b N.B.1, APP Technical Note: Note 6 (2x)

2. Limit controlled components referred to as components

Change specially designed to "required" 4A001, 4A003, 4A994.a

Delete specially designed 4A004

4. Limit what is excepted from control

Change specially designed to required 4A994 Note 1.b. N.B.1, 4D001 STA

Change specially designed to rated 4A001.a.1 Note, 4A003.c Note 2, 4A994.c Note

Change specially designed to rated or certified 4A001.a.1 Note, 4A001.a.2 Note

Delete specially designed 4A003 Note 2 N.B.1

B Specially designed or modified

1. Limit controlled item to its controlled parameters (excluding components)

Change specially designed or modified to "required" 4D001.a, b, b.2, 4D002, 4D002 TSR, 4D994, 4E001.b, b.2

Change specially designed or modified to rated 4A994.c

Delete specially designed or modified to be capable of 4A003.c

D Designed or modified

1. Limit controlled item to its controlled parameters (excluding components)

Change designed or modified to "required" 4D993.a

Change designed or modified for use in to "required" 4A101

Delete designed or modified 4A003.b

E. Capable of

4 Limit what is excepted from control

Delete capable of 4A003 Note 1

F. Designed

1. Limit controlled item to its controlled parameters (excluding components)

Change designed to "required" 4E993

Change inherently limited by nature of their design for use as to "required" for 4A003.c Note 1

Change designed to rated 4A101.b

Change designed to be capable of to rated 4A994.c.1

Delete designed or rated 4A101.b Note

4. Limit what is excepted from control

Change designed to rated 4A980 Note

G Miscellaneous expressions

1. Limit controlled item to its controlled parameters (excluding components)

Change required to “required” 4A994 Note 1.b NB 1

Change essential to “required” 4A994 Note 1.a

Change specified to controlled EAR99

Delete related 4A001, 4A001 Unit, 4A001 Related Controls

Delete required 4A003 Note 2 N.B.1

3. Limit controlled contained items not using the word components

Change parts and accessories to “electronic assemblies” and components 4A994 Unit

H Replace absence of any expression

1. Limit controlled item to its controlled parameters (excluding components)

Add “required” 4A980, 4E992, 4E993

July 17, 2012

Specially Designed Issues: CCL Category 5

Category 5 - "Telecommunications" and "Information Security"
Part 1 "Telecommunications"
Note 1: ... ~~specially designed~~ "required" for ...
N.B. For "lasers" ~~specially designed~~ "required" for ...
Note 2: ... when ~~essential~~ "required" for ... ~~specially designed~~ "required" components ...

5A001
... ~~and accessories~~
Unit: ... ~~and accessories~~ ...
a.1 ~~Specially designed~~ "Required" to withstand ...
a.2 ~~Specially hardened~~ "Required" to withstand ...
a.3 ~~Specially designed~~ Rated to operate outside the temperature range ...
Note: 5A001.a.2 and 5A001.a.3 do not apply to equipment ~~designed or modified~~ rated for use on board satellites.
b Telecommunications systems and equipment, and ~~specially designed~~ components ~~and accessories~~ "required" therefor, having ...
b.2.b ... ~~having a capability~~ rated to ...
b.3.b Note: 5A001.b.3.b does not control radio equipment ~~specially designed~~ rated for ~~use with civil~~ cellular radio-communications systems
b.5 Note: 5A001.b.5 does not control radio equipment ~~specially designed~~ rated for ~~use with civil~~ cellular radio-communications systems.
c Optical fibers ... ~~specified by the manufacturer as being capable of withstanding~~ "required" to withstand ...
e. ... and ~~specially designed~~ components "required" therefor
f Jamming equipment ~~specially designed or modified~~ "required" to ...: and ~~specially designed~~ components ~~therefore~~ "required" therefor
g ... ~~specially designed~~ "required" for ...
h Electronic equipment ~~designed or modified~~ "required" to ...
i Systems or equipment ~~specially designed or modified~~ "required" to intercept and process the air interface of 'mobile telecommunications', and ~~specially designed~~ components "required" therefor
Note: 5A001.i does not apply to equipment ~~designed~~ rated for ... network operators

5A101
... ~~designed or modified~~ "required" for ... ~~capable of~~ rated for
Note: 5A101 does not control:
1. Telecontrol equipment ~~specially designed~~ rated ~~to be used~~ for
2. Equipment ~~designed or modified~~ rated for.
3. Ground-based equipment ~~designed or modified~~ rated for
4. Equipment ~~designed~~ rated for

Note: Item 5A101 does not include items not ~~designed or modified~~ "required" for unmanned aerial vehicles or rocket systems ... ~~capable of~~ rated for a maximum "range" equal to or greater than 300 km (e.g., telemetry circuit cards ~~limited by design to~~ rated for reception only and ~~designed for use in~~ rated for personal computers~~)~~.

5A980

Devices ~~primarily useful~~ "required" for the surreptitious interception of wire, oral, or electronic communications; and ~~parts and accessories~~ components "required" therefor

Related Controls: ... ~~specially designed or modified~~ to intercept ... ~~specially designed~~ components

5A991

Related Definitions ...(5) ... beyond ~~the basic capabilities of~~ a basic virtual call

a ... ~~specially designed~~ rated to operate outside the temperature range ...

b ... and ~~specially designed~~ components ~~and accessories~~ "required" therefor, ...

Note: ... b. ~~Designed for use in~~ single or multi-channel communication ...

b.1 ... ~~designed~~ rated to operate at ...

Note: 5A991.b.1 does not control equipment ~~specially designed~~ rated to be integrated and operated in any satellite system for civil use.

(It is unclear whether this is a decontrol Note or a jurisdictional Note. The phrase "for civil use" suggests the former. However, "in any satellite system" suggests the latter (see existing Related Controls text). If the latter, then "required", rather than rated, and deletion of for civil use is suggested.)

b.7 Note 1: 5A991.b.7 does not control equipment ~~specially designed~~ rated to be integrated and operated in any satellite system for civil use.

(See comment above on Note re 5A991.b.1.)

c ... and ~~specially designed~~ components ~~and accessories~~ "required" therefor, ...

c.1 ... ~~designed~~ rated for "packet mode operation" ... and assemblies and components "required" therefor ...

c.3 Note: The restrictions in 5A991.c.3 do not apply to networks ~~restricted to using only~~ rated for "network access controllers" or to "network access controllers" themselves.

c.6 ~~Designed~~ Rated for automatic hand-off ...

d Optical fibers ... ~~designed~~ rated for single mode operation

f ... ~~designed~~ rated to permit electronic control of beam shaping ...

g ... assemblies and components "required" therefor; or

h ... ~~designed~~ rated for ~~use at~~ frequencies ... and assemblies and components "required"

therefor

5B001
Telecommunication test, inspection and production equipment, components ~~and accessories,~~ as follows (See List of Items Controlled).
STA:... equipment and ~~specially designed~~ components or accessories therefor, ~~specially designed~~ for...
Unit: ... ~~and accessories~~
a Equipment and ~~specially designed~~ components ~~or accessories~~ therefor, ~~specially designed~~ "required" for ...
b Equipment and ~~specially designed~~ components ~~or accessories~~ therefor, ~~specially designed~~ "required" for ...
b.2 Note: 5B001.b.2.d does not ~~include~~ control equipment ~~specially designed~~ rated for the "development" of commercial TV systems.

5C991
... ~~optimized~~ "required" for ~~the manufacture of~~ optical fibers controlled by 5A991

5D001
CIV: .. controlled by 5D001.a and ~~specially designed~~ for ...
TSR: ... controlled by 5D001.a and ~~specially designed~~ for ...
STA: .. 5D001.a "software" ~~specially designed~~ for ... 5B001.b for "software" ~~specially designed or modified~~ to support technology
a "Software" ~~specially designed or modified~~ "required" for ...
b "Software" ~~specially designed or modified~~ "required" for ...
c "Software" ~~specially designed or modified~~ "required" for ...
d "Software" ~~specially designed or modified~~ "required" for ...
d.1 Equipment employing digital techniques, including ~~designed~~ rated to ...
d.2 Note: 5D001.d.2.b does not control "software" ~~specially designed or modified~~ rated for the "development" of commercial TV systems

5D101
"Software" ~~specially designed or modified~~ "required" for ...

5D980
a. "Software" ~~primarily useful~~ "required" for the surreptitious interception of ...
b. "Software" ~~primarily useful~~ "required" for the "development" ...

5D991
"Software"~~specially designed or modified~~ "required" for ...
~~a.~~ "Software"... ~~specially designed~~ "required" for "dynamic adaptive routing".

5E001
TSR: ... (2) ... 5D001.a that is ~~specially designed~~ for ...

b.1 ... telecommunications equipment ~~specially designed to be used on board~~ "required" for satellites

b.2 "Technology" "required" for the "development" or "use" of "laser" communication techniques ~~with the capability of~~ rated for automatically ...

b.3 "Technology" "required" for the "development" of digital cellular radio base station receiving equipment ~~whose reception capabilities that allow~~ rated for multi-band, multi-channel, multi-mode, multi-coding algorithm or multi-protocol ~~operation can be modified by changes in "software"~~ reception;

b.4 "Technology" "required" for ...

c.1 ... ~~designed to operate~~ operating ...

c.2.c Note: 5E001.c.2.c applies to "technology" ~~specially designed~~ for ...

c.4.b Note: 5E001.c.4.b does not control "technology" for the "development" or "production" of equipment ~~designed or modified~~ rated for operation in any frequency band which is "allocated by the ITU" ...

d ... power amplifiers ~~specially designed~~ "required" for telecommunications and ...

e ... electronic devices and circuits ~~, specially designed~~ "required" for telecommunications and containing components manufactured from "superconductive" materials~~, specially designed~~ rated for operation at temperatures ...

e1 ... circuits ~~using~~ "superconductive" gates

e.2 ... ~~using~~ resonant circuits ...

5E980

"Technology" ~~primarily useful~~ "required" for

5E991

a.1 "Technology" "required" for the processing and application of coatings to optical fiber ~~specially designed to make it suitable~~ for underwater use;

a.2 "Technology" "required" for ...

Part 2 - "Information Security"

Note 3.b The cryptographic functionality ~~cannot be~~ is not easily changed by the user

Note 3.c ~~Designed for~~ installation by the user ..

Note 4.a.2 ... ~~parts and~~ components ...

Note 4.b The cryptographic functionality is ~~limited to~~ supporting their primary function ...

5A002

Note: 5A002 does not control any of the following ...

(a)(1) A smart card ... that meets ~~any~~ **all** of the following:

(a)(1)a ~~The cryptographic capability is restricted for use in equipment or systems excluded from 5A002 by Note 4 in Category 5 Part 2 or entries (b) to (i) of this Note and cannot be reprogrammed for any other use; or~~

(a)(1)b ~~Having all of the following:~~

(a)(1)b.1 It is ~~specially designed and limited~~ rated to allow protection ...

(a)(1)b.2 ~~Has been, or can only be,~~ It is personalized ...

(a)(1)3 Where the ~~cryptographic capability~~ cryptography is not user-accessible;
(a)(2) 'Readers/writers' ~~specially designed or modified, and limited,~~ rated for items ~~specified by~~ described in (a)(1) of this Note.
(b) . N.B. .. ~~specified~~ described in
(d) Cryptographic equipment ~~specially designed and limited~~ rated for banking ~~use~~ or 'money transactions';...
(e) Portable or mobile radiotelephones ~~for civil use (e.g., for use with commercial civil cellular radio communication systems)~~ that are not ~~capable of~~ rated for ...
(f) Cordless telephone equipment not ~~capable of~~ rated for ... ~~according to the manufacturer's specifications~~;
(g) ... devices ~~for civil use~~, that implement ~~only~~ published ... customized for a ~~specific~~ civil industry application ...
(h) N.B.... ~~specified~~ described in
(i) ... ~~capability is limited to~~ function is rated for ... ~~according to the manufacturer's specifications~~..
(j) ... no functionality ~~specified~~ controlled by 5A002.a.2, 4, 7, or 8, where all cryptographic ~~capability~~ functionality ~~specified~~ controlled by 5A002.a.1, 5, 6, or 9 meets any of the following:
1. It ~~cannot be~~ is not used; or
2. It ~~can only be made~~ is usable by means of "cryptographic activation".

Items
a Systems, equipment, application specific "electronic assemblies", modules and integrated circuits "required" for "information security", as follows, and components "required" therefor ~~specially designed for "information security"~~.
a.1 ~~Designed or modified to use~~ "cryptography" ... and ~~having~~ rated for any of the following:
Note: 5A002.a.1 includes ~~equipment designed or modified to use~~ "cryptography" employing analog principles when implemented with digital techniques.
a.2 ~~Designed or modified~~ Rated to ...
a.4 ~~Specially designed or modified~~ Rated to ...
a.5 ~~Designed or modified~~ Rated to ...
a.6 ~~Designed or modified~~ Rated to ... and ~~having~~ rated to have any of the following
a.8 Communications cable systems ~~designed or modified using~~ rated for ...
a.9 ~~Designed or modified~~ Rated to ...
b ... ~~designed or modified~~ "required" ...

5A992 b .
.. and components "required" therefor.

5B002
a. Equipment ~~specially designed~~ "required" for ...
b. Measuring equipment ~~specially designed~~ "required" to ..

5D002
Related Controls: (1) This entry does not control "software" ~~"required"~~ for ...

Related Definitions: 5D002.a controls “software” ~~designed or modified to use~~ “required” for ...

a “Software” ~~specially designed or modified~~ “required” for ...

b “Software” ~~specially designed or modified~~ “required” to ...

d “Software” ~~designed or modified~~ “required” to enable an item to achieve or exceed the controlled performance levels for functionality specified by 5A002.a that would not otherwise be enabled....

5D992

Related Controls: This entry does not control “software” ~~designed or modified~~ rated to ...

a. “Software” ~~specially designed or modified~~ “required” for ...

5E002

Related Controls: ... This entry does not control “tecnology” ~~“required”~~ for the “use” of equipment excluded from control under the Related Controls paragraph or the Technical Notes in ECCN 5A002 or “technology” related to equipment excluded from control under ECCN 5A002.

EAR99

... ~~specified in~~ controlled by ...

Recapitulation

A. Specially designed

1. Limit controlled item to its controlled parameters (excluding components)
   - Change specially designed to "required" Category 5 Part 1 Note 1, Note 1 NB, 5A001.a.1, g, 5B001.a, b, 5D991.a, 5A002.a
   - Change specially designed to be used on board to "required" for 5E001.b.1
   - Change specially designed to make it suitable to "required" 5E991.a.1
     - Change specially designed to rated 5A001.a.3, 5A991.a, 5E001.e
   - Delete specially designed 5B001 STA, 5D001 CIV, TSR, STA, 5E001 TSR (2), 5E001.c.2.c Note
2. Limit controlled components referred to as components
   - Change specially designed to "required" Category 5 Part 1 Note 2, 5A001.b,e,f,i, 5A991.c, 5B001.a, b, 5E001.e, 5B002.a, b
   - Delete specially designed 5B001 STA, 5A980 Related Controls
4. Limit what is excepted from control
   - Change specially designed to rated 5A001.b.3.b Note, b.5 Note, 5A991.b.1 Note, b.7 Note, 5B001.b.2.d Note
   - Change specially designed to be used to rated 5A101 Note 1
   - Change specially designed and limited to rated 5A002 Note (a)(1)1, (d)
   - Delete specially designed and limited 5A002 Note (a)(1)b.1

B Specially designed or modified

1. Limit controlled item to its controlled parameters (excluding components)
   - Change specially designed or modified to "required" 5A001.f,i, 5D001.a, b, c, d, 5D101, 5D991, 5D002.a, b, 5D992.a
     - Change specially designed or modified to rated 5A002.a.4
   - Delete specially designed or modified 5A980 Related Controls, 5D001 STA
4. Limit what is excepted from control
   - Change specially designed or modified to rated 5D001.d.2.b Note
   - Change specially designed or modified and limited to rated 5A002 Note (a)(2)

D Designed or modified

1. Limit controlled item to its controlled parameters (excluding components)
   - Change designed or modified to use to "required" 5D002 Related Definition
   - Change designed or modified to enable an item to achieve or exceed the controlled performance levels for functionality specified by to "required" for 5D002.d
     - Change designed or modified to rated 5A002.a.2, a.5, a.6, a.9
   - Change designed or modified for use to rated for 5A002.a.1
   - Change designed or modified using to rated for 5A002.a.8
   - Change capabilities and modified to rated 5E001.b.3
   - Delete designed or modified 5A002.a.1 Note

4. Limit what is excepted from control

Change designed or modified to "required" 5A001.h, 5A101, 5A101 Note
Change designed or modified to rated 5A001.a.2 and a.3 Note, 5A101 Note 2, Note 3, 5E001.c.4.b Note, 5D992 Related Controls

E. Usable in or capable of

1. Limit controlled item to its controlled parameters (excluding components)

Change specified by the manufacturer as being capable of to "required" 5A001.c
Change capability to rated 5A001.b.2.b, 5A101
Change with the capability of to rated 5E001.b.2
Delete capabilities 5A991 Related Definitions (5)
Delete using 5E001.e.1, e.2

4. Limit what is excepted from control

Change capable of to rated for 5A101 Note
Change restricted to using to rated 5A991.c.3 Note
Change capable of according to the manufacturer's specifications to rated for 5A002 Note (f)
Change capability is limited according to the manufacturer's specifications to rated for 5A002 Note (i)
Delete capability 5A002 Note (a)(1)a, (a)(1)b.3
Delete civil use 5A002 Note (e), (g)
Delete can 5 part 2 Note 3.b, 5A002 Note (a)(1)a, (a)(1)b.1, (j)1, (j)2

F. Designed

1. Limit controlled item to its controlled parameters (excluding components)

Change designed to rated 5A991.b.1, c.1, c.6, d, f, 5D001.d.1
Change designed for use at to rated for 5A991.h
Delete designed 5E001.c.1
Delete designed for use in 5A991.b Note b

4. Limit what is excepted from control

Change designed to rated 5A001.i Note, 5A101 Note 4
Change limited by design to to rated for 5A101 Note
Change designed for use in to rated for 5A101 Note
Delete designed for 5 Part 2 Note 3.c.

G Miscellaneous expressions

1. Limit controlled item to its controlled parameters (excluding components)

Change essential to "required" 5 Part 1 Note 2
Change primarily useful to "required" 5A980, 5D980.a, b, 5E980
Change optimized to "required" 5C001
Change specially to rated to 5A001.a.2
Change having to rated to have 5A002.a.6

3. Limit controlled contained items not using the word components
   Delete accessories 5A001 Unit,.b, c, c.2, 5A991.c, 5B001, 5B001 Unit, a, b
   Delete parts and accessories 5A980
   Delete parts Category 5 Part 2 Note 4.a.2
4. Limit what is excepted from control
   Change specified to described 5A002 Note (a)(2), (b) N.B., (h)N.B.
   Change specified to controlled 5A002 Note (j), EAR99
   Delete "required" 5D002 Related Controls, 5E002 Related Controls
   Delete limited to 5 part 2 Note 4.b
   Delete only 5A991.c.3 Note, 5A002 Note (g), (j)2
   Delete specific 5A002 Note (g)

H Replace absence of any expression

2. Limit controlled components referred to as components
   Add "required" 5A991.c.1, g, h, 5A992.b, 5A002.a
   Add "required" components 5A980
3. Limit controlled contained items not using the word components
   Add "required" (assemblies) 5A991.c.1, h, 5E001.b.2, b.3, b.4, 5E991.a.2

July 17, 2012

Specially Designed Issues CCL Category 6

6A001

LVS: $3,000; N/A for ...a.2.c ~~and specially designed for real-time application with towed acoustic hydrophone arrays~~ ... a.2.f ~~and having processing equipment specially designed for real-time application with bottom or bay cable systems.~~

(These characteristics appear in a.2.c and a.2.f.)

a. Marine acoustic systems, equipment and ~~specially designed~~ components "required" therefor, as follows:

a.1... and ~~specially designed~~ components "required" therefor, as follows:

Note: 6A001 does not control:

a. ... and ~~limited to~~ rated for measuring ...

b.2 Pingers ~~specially designed~~ rated for ...

a.1.a.1 ... ~~designed~~ rated for

a.1.a.1.a ~~Designed~~ Rated to

a.1.a.1.b ~~Designed~~ Rated to

a.1.a.2 ... ~~designed~~ rated for

a.1.a.2.a ~~Designed or modified~~ Rated to

a.1.a.3 ... ~~designed~~ rated for

a.1.a.3.a ~~Designed or modified~~ Rated to

a,1,b Systems or transmitting and receiving arrays ~~designed~~ "required" for ...

a.1.b.5 ~~Designed~~ Rated to

a.1.b.6 ~~Designed~~ Rated to

a.1.c ... operating individually or in a ~~designed~~ combination

(A combination is recognizable without the word "designed.")

Note 1: The control status of acoustic projectors, including transducers, ~~specially designed~~ "required" for other equipment described in an ECCN numbered xx0xx is determined by the control status of the other equipment.

a.1.d Acoustic systems and equipment ~~designed~~ rated to determine... and ~~specially designed~~ components "required" therefor

Note: 6A001.a.1.d includes: ...

b ... Equipment ~~capable of~~ rated for ...

a.1.e Active individual sonars ~~specially designed or modified~~ "required" to

N.B.: For diver detection systems ~~specially designed or modified~~ "required" for military use, see the U.S. Munitions List ...

Note: For 6A001.a.1.e, where multiple detection ranges are ~~specified~~ rated for various environments ...

a.2 ... and ~~specially designed~~ components "required" therefor, as follows:

Note ... and ~~specially designed~~ components "required" therefor

a.2.a Note: The control status of hydrophones ~~specially designed~~ "required" for other equipment described in an ECCN numbered xx0xx is determined by the control status of the other equipment.

a.2.a.5 ~~Designed~~ Rated to
a.2.a.6 ~~Designed~~ Rated for
a.2.b.2 ~~Designed~~ Rated or 'able to be modified' to
a.2.c Processing equipment, ~~specially designed~~ ":required" for ...
a.2.d.2 ~~Designed~~ Rated to
a.2.e.2.a ~~Designed~~ Rated to
a.2.e.2.b ~~Capable of~~ Rated for being ...
a.2.f Processing equipment, ~~specially designed~~ :"required" for ...
a.2 Note: 6A001.a.2 also applies to receiving equipment, whether or not ~~related~~ rated in normal application to separate active equipment, and ~~specially designed~~ components "required" therefor
b ... ~~designed~~ rated to ...
b.1.a ~~Designed~~ Rated to
Note 1: 6A001.b does not apply to depth sounders ~~limited to~~ rated for any of the following:
Note 2: 6A001.b does not apply to equipment ~~specially designed~~ rated for ...

6A002
MT applies ... ~~specially designed or modified~~ "required" to protect ...and ~~usable~~ "required" for "missiles"
Related Controls: The following commodities are subject to the export licensing authority of U.S. Department of State, Directorate of Defense Trade Controls (22 CFR part 121): (1) "Image intensifiers" defined in 6A002.a.3 ~~specially designed or modified, or configured for military use and not part of civil equipment~~ as defined in the USML;
a.2 ... and ~~specially designed~~ components therefor, as follows:
Note: 6A002.a.2 does not control non-imaging photomultiplier tubes have an electron sensing device in the vacuum space ~~limited solely to~~ and having any of the following:
a.2.a.2.b An electron sensing device with a non-binned pixel pitch of 500 micrometer or less, ~~specially designed or modified~~ "required" to achieve 'charge multiplication' other than by a microchannel plate;
a.2.b.2.b An electron sensing device with a non-binned pixel pitch of 500 micrometer or less, ~~specially designed or modified~~ "required" to achieve 'charge multiplication' other than by a microchannel plate;
a.2.c ~~Specially designed~~ components, as follows:
a.2.c.2 An electron sensing device with a non-binned pixel pitch of 500 micrometer or less, ~~specially designed or modified~~ "required" to achieve 'charge multiplication' other than by a microchannel plate;
a.2.c.3 Note: 6A002.a.2.c.3 does not control compound semiconductor photocathodes ~~designed to achieve~~ with a maximum "radiant sensitivity" ...
a.3 ... Note 2: 6A002.a.3 does not control: ...
c "Focal plane arrays" ~~specially designed or modified to achieve~~ 'charge multiplication' ~~and limited by design to have~~ with a maximum "radiant sensitivity" of ... having all the following:

c.1 Incorporating a response limiting mechanism ~~designed~~ not to be removed or modified; and

Technical Note: A response limiting mechanism integral to the detector element is ~~designed~~ may not ~~to~~ be removed or modified without rendering the detector inoperable

a.3.a.2.b ~~Specially designed or modified~~ "required" to achieve 'charge multiplication' and ~~having~~ to have a maximum "radiant sensitivity" exceeding ...

a.3.b.2.b ~~Specially designed or modified~~ "required" to achieve 'charge multiplication' and ~~having~~ to have a maximum "radiant sensitivity" exceeding ...

a.3.g.2 ~~Specially designed or modified~~ "required" to achieve 'charge multiplication' and ~~having~~ to have a maximum "radiant sensitivity" exceeding ...

b ... ~~designed~~ rated for

b.1 Note: 6A002.b.1 does not control ... and only incorporating any of the following ...

a. Charge Coupled Devices (CCD) not ~~designed or modified to achieve~~ with 'charge multiplication'; or

b. Complementary Metal Oxide Semiconductor (CMOS) devices not ~~designed or modified to achieve~~ with 'charge multiplication'.

b.2 ~~Being specified~~ Rated for ...

b.2.b.2 ~~Designed~~ Rated for

c Note: 6A002.c does not control ..

e. Equipment ~~specially designed~~ rated for ...

d ~~Special support~~ components "required" for optical sensors, as follows:

d.3 Optical sensing fibers ~~specially fabricated~~ rated either compositionally or structurally, or ~~modified~~ by coating, to

Note: 6A002.d.3 does not apply to ... ~~specially designed~~ rated for ...

6A003

Related Controls: ....(3) See ECCN 8A002.d and .e for cameras ~~specially designed or modified~~ for underwater use.

a. Instrumentation cameras and ~~specially designed~~ components "required" therefor

Note: Instrumentation cameras ... should be evaluated by their maximum ~~capability~~ speeds ...

a.1 ... ~~capable of~~ rated for recording at framing rates ...

Note: 6A003.a.1 does not control cinema recording cameras ~~designed~~ rated for civil purposes.

a.2 ... ~~capable of~~ rated for recording at rates ...

a.5.a An electronic shutter speed (gating ~~capability~~) of ...

a.6.a ~~Specially designed~~ "Required" for ...

b Note: 6A003.b does not control television or video cameras ~~specially designed~~ rated for television broadcasting.

b.2 Note: 6A003.b.2 does not apply scanning cameras ... ~~specially designed~~ rated for...

a Industrial or civilian photocopiers; or

b Image scanners ~~specially designed~~ rated for ... close proximity scanning ...

b.4.a Note 2.d Equipment ~~specially designed~~ rated for laboratory use

b.4.b Note 3.b.4.b The camera is ~~designed~~ rated for a single kind of application and ~~designed~~ rated not to be user modified

Note 3.c The camera is ~~specially designed~~ rated for installation into a civilian passenger land vehicle ...

Note 3.c.1.b ~~A specially designed~~ An authorized maintenance test facility

b.4.c Note 4.a.1 Where the camera is ~~specially designed~~ rated for installation as an integrated component into indoor and wall-plug-operated systems or equipment, ~~limited by design~~ rated for a single kind of application, as follows

Note 4.a.1.b Laboratory equipment ~~specially designed~~ rated for scientific research:

Note 4.a.2.b ~~A specially designed~~ An authorized maintenance test facility

Note 4.b The camera is ~~specially designed~~ rated for installation into a civilian passenger land vehicle ...

Note 4.b.1.b ~~A specially designed~~ An authorized maintenance test facility

Note 4.c ~~Limited by design to have~~ a maximum "radiant sensitivity" of ... or less

Note 4.c.1 Incorporating a response limiting mechanism ~~designed~~ not to be removed or modified

Note 4.c.3 Not ~~specially designed or modified~~ rated for underwater use

6A004

Related Controls: (1) For optical mirrors or 'aspheric optical elements' ~~specially designed~~ for lithography equipment, see ECCN 3B001.

(3B001, rather than 6A004, should define this equipment.)

a.1 "Deformable mirrors" ... , and ~~specially designed~~ components "required" therefor, ~~capable of~~ "required" for dynamically repositioning ...

c.3 Segments ... of mirrors ~~designed~~ rated to be assembled in space

c.4 Components ~~manufactured~~ from "composite" materials having ...

d.1 Equipment ~~specially designed~~ "required" to ...

d.3.d.1 ... ~~capable of~~ rated for angular accelerations ...

d.3.d.2 ... ~~capable of~~ with angular accelerations ...

d.4 ~~Specially designed~~ "Required" to maintain ...

Technical Note 2. Manufacturers are not required to measure the surface roughness listed in 6A004.e.2 unless the optical element was ~~designed or manufactured with the intent~~ rated to meet, or exceed, the control parameter.

e ... having an inner mirror ~~capabilities~~ ...

6A005

Related Controls:... (4) See ECCN 3B001.f.3 for excimer "lasers" ~~specially designed~~ for lithography equipment. (5) "Lasers" ~~specially designed or prepared for use in~~ as defined by NRC for isotope separation are subject to the export licensing authority of the Nuclear Regulatory Commission (see 20 CFR part 110), (6) Shared aperture optical elements~~, capable of operating in "super-high power laser" applications,~~ and "lasers" ~~specifically designed, modified, or configured for military application~~ as defined in the USML are subject to the export licensing authority of the U.S. Department of State, Directorate of Defense Trade Controls (see 22 CFR

part 121).
a.6.b Note: 6A005.a.6.b does not control ... components ~~required~~ needed ,..
b.6.b.1.b ... ~~limited by design to~~ rated for a maximum pulse repetition ...
b.6.b.1.c ... ~~capable of~~ rated for ...
b.6.b.1.d ... ~~capable of~~ rated for ...
d.1.e ... ‘stacked arrays’ other than those ~~specified~~ controlled by ...
d.1.e.1 ~~Specially designed or modified~~ Rated to be combined with other ‘stacked arrays’
Note 1: ‘Stacked arrays’, formed by combining semiconductor “laser” ‘stacked arrays’ ~~specified~~ controlled by 6A005.d.1.e that are not ~~designed~~ rated to be further combined ~~or modified~~ are ~~specified~~ controlled by 6A005.d.1.d.
Note 2: ‘Stacked arrays’, formed by combining semiconductor “laser” ‘stacked arrays’ ~~specified~~ controlled by 6A005.d.1.e that are designed rated to be further combined ~~or modified~~ are ~~specified~~ controlled by 6A005.d.1.e.
Note 3: 6A005.d.1.e does not apply to modular assemblies of single ‘bars’ ~~designed to be fabricated into~~ in end-to-end stacked linear arrays.
e.2 Optical mirrors ... ~~specially designed~~ “required” for ~~use with~~ controlled “lasers”
f.1 ... ~~capable of~~ rated for ...
f.2 ... ~~capable of~~ rated for ...
f.3 Optical equipment and components ~~specially designed~~ “required” for a phased array ... at the ~~designed~~ rated wavelength, or 0.1 micrometer, whichever is smaller
f.4 Projection telescopes ~~specially designed~~ “required” for ~~use with~~ “SHPL” systems.

6A006
“Magnetometers” ..., and ~~specially designed~~ components “required” therefor, as follows
LVS: ... ~~defined in~~ controlled by ...
Related Controls: ... This entry does not control ... ~~specially designed~~ rated for ...
a.1.a SQUID systems ~~designed~~ “required” for stationary operation, without ~~specially designed~~ subsystems ~~designed~~ to reduce in-motion noise, ...
a.1.b SQUID systems having an in-motion-magnetometer ‘sensitivity’ ... and ~~specially designed~~ “required” to reduce in-motion noise.
e ... ~~specified~~ controlled ... ~~specified~~ controlled ...

6A007 a.
Gravity meters ~~designed or modified~~ “rated” for ...ground use ...
b Gravity meters ~~designed~~ rated for mobile platforms ...

6A008
Radar .. . and ~~specially designed~~ components “required” therefor
MT applies to ~~items that are designed for airborne applications and that are usable in systems controlled for MT reasons~~ the portion of 6A008 also described in 6A103 or 6A108
(6A008 specifications differ in many respects from those in MTCR items 11.A.1, 12.A.5, and 18.A.3, which are described in 6A103 and 6A108.)
b Technical Note: ... lowest ~~specified~~ rated operating frequencies
c ~~Capable of~~ Rated for operating ...

d ~~Capable of~~ Rated for operating ...
f ~~Capable of~~ Rated for heightfinding ...
g ~~Specially designed~~ "required" for ...
i Note: 6A008.i does not control: ...
  b Ground radar equipment ~~specially designed~~ rated for ...
  b.2 ~~Configured so that~~ radar target data ~~can~~ rated to be transmitted only one way from the radar site to one or more ~~civil~~ ATC centers.
j.3 ~~Designed~~ Rated for ...
  Note 1: LIDAR equipment ~~specially designed~~ for surveying is only ~~specified~~ controlled by 6A008.j.3
  Note 2. 6A008.j does not apply to LIDAR equipment ~~specially designed~~ rated for meteorological observation.
l.4 Note: 6A008.l.4 does not control systems, equipment and assemblies ~~designed~~ rated for marine traffic control.

6A102
Radiation hardened detectors ... ~~specially designed or modified~~ "required" for protecting against nuclear effects... and ~~usable~~ "required" for "missiles," ~~designed or~~ rated to withstand radiation levels ...

6A103
Radomes ~~designed~~ rated to ... ~~usable in~~ "required" for protecting "missiles" against nuclear effects ... and ~~usable~~ "required" for "missiles".

6A107
Gravity meters (gravimeters) ~~and specially designed components for gravity meters and gravity gradiometers~~, as follows (see List of Items Controlled, and components "required" therefor
a Gravity meters (gravimeters)... ~~designed or modified~~ rated for airborne or marine use and ~~having~~ for a static or operational accuracy of ... and ~~having~~ for a time to steady-state registration .. ~~usable~~ "required" for "missiles"
~~b~~ ~~Specially designed~~ components "required" for gravity meters controlled in 6A007.b or 6A107.a and gravity gradiometers controlled in 6A007.c.

6A108
Related Controls:(1) This entry does not control ... provided that they do not incorporate any of the following ... or (d) Signal processing ~~specially designed~~ "required" for the tracking of vehicles. (2) Items in 6A108.a that are ~~specially designed or modified for "missiles" or for items~~ on the U.S. Munitions List are subject to the export licensing authority of the U.S. Department of State ...
Related Definitions: ... embody ~~specialized~~ transmission ...
a Radar and laser radar systems ~~designed or modified for use in~~ "required" for "missiles".
b Precision tracking systems ~~usable~~ :"required" for rockets, missiles, or unmanned aerial vehicles ~~capable of achieving~~ rated for a "range" ...
b.2 Range instrumentation radars including ~~associated~~ optical/infrared trackers ~~with~~ rated for

all of the following ~~capabilities~~:

6A203

Unit:: Equipment and components in number~~; parts and accessories in $ value~~

(NSG 1.A.2, 5.B.3, and 5.B.4 do not control parts or accessories.)

a Mechanical rotating cameras~~, as follows,~~ and ~~specially designed~~ components therefor, as follows:

a.3 ~~Note:~~ Components of cameras controlled by 6A203.a ~~include~~ as follows: their synchronizing electronics units and rotor assemblies consisting of turbines, mirrors and bearings

b.1 ... ~~capable of~~ rated for ...

b.2 Streak tubes "required" for cameras controlled by

b.3 ... ~~capable of~~ rated for ...

b.4 Framing tubes and solid-state imaging devices "required" for ~~use with~~ cameras controlled by 6A203.b.3, as follows:

b.4.d Other framing tubes and solid-state imaging devices ...~~specially designed for cameras controlled by 6A203.b.3~~

(Strike thru text in b.4.d is redundant, repeating text from b.4.)

c ~~Radiation-hardened~~ TV cameras, or lenses "required" therefor, ~~specially designed or~~ rated as radiation hardened to withstand a total radiation dose ...

6A205

Related Controls: ... (4) "Lasers" ~~specially designed or prepared~~ as defined by NRC for ~~use in~~ isotope separation are subject to the export licensing authority of the Nuclear Regulatory Commission (see 10 CFR part 110).

a Argon ion "lasers" ~~having~~ rated for both of the following ~~characteristics~~

b ... oscillators ~~having~~ rated for all of the following ~~characteristics~~

b.2 ~~Having~~

d Pulsed carbon dioxide "lasers" ~~having~~ rated for all of the following ~~characteristics~~

e Para-hydrogen Raman shifters ~~designed~~ rated to operate at ...

f ... ~~having~~ rated for either of the following:

6A225

Velocity interferometers rated for measuring .....

Unit: ~~Equipment in~~ number~~; parts and accessories in $ value~~

6A226

Unit: Equipment in number~~; parts and accessories in $ value~~

a Manganin gauges rated for pressures ...

b Quartz pressure transducers rated for pressures ...

6A991 .

.. acoustic equipment ... ~~capable of~~ rated for ... and ~~specially designed~~ components "required" therefor, n.e.s.

Unit: Equipment in number; ~~parts and accessories~~ components in $ value
a ... and ~~specially designed~~ components "required" therefor

6A992
RS applies ... Country Chart ~~is not designed to~~ does not determine ...
Unit: Equipment in number; ~~parts and accessories~~ components in $ value
a. Image intensifier tubes and ~~specially designed~~ components "required" therefor
a.1 Image intensifier tubes ~~having~~ rated for all the following:
a.2 ~~Specially designed~~ microchannel plates ~~having~~ rated for ...

6A994
Unit: Equipment in number; ~~parts and accessories in $ value~~

6A995
Unit: Equipment in number~~; parts and accessories in $ value~~
a. ... ~~having~~ rated for ...
b.1. ... ~~having~~ rated for ...
b.2 ... ~~having~~ rated for ...
c ... ~~having~~ rated for ...
d ... ~~having~~ rated for ...
d.2.a.1 ... ~~capable of~~ operating ...
e ... ~~having~~ rated for ...
f ... ~~having~~ rated for ... and ~~having~~ rated for ...

6A996
"Magnetometers" ... sensors, and ~~specially designed~~ components "required" therefor ...
a. ... ~~having~~ rated for ...
b.1 ~~Designed~~ Rated for
b.2 ~~Designed~~ Rated for
b.3 ~~Having~~ Rated for ...
b.3.b ~~Designed~~ Rated for
b.3.c ~~Designed~~ Rated for
b.3.d ~~Having~~ Rated for ...

6A997
Gravity meters (gravimeters) rated for ground use ...
a ~~Having~~ Rated for ...

6A998
Radar ... and ~~specially designed~~ components "required" therefor.
a Airborne radar equipment~~, n.e.s., and specially designed components therefor~~.
b ... (LIDAR) equipment ~~specially designed~~ "required" for surveying or for meteorological observation

6A999
AT applies: ... Country Chart ~~is not designed to~~ does not determine

6B004 a
Equipment rated for measuring ...
b Equipment ... ~~having~~ rated for ... ~~specially designed~~ "required" for ...

6B007
Equipment rated to produce, align and calibrate land-based gravity meters with a static accuracy of ...

6B008
Pulse radar cross-section measurement systems ~~having~~ rated for transmit pulse widths of 100 ns or less, and ~~specially designed~~ components "required" therefor

6B108
Systems, ... ~~specially designed~~ "required" for radar cross section measurement ~~usable~~ for rockets, missiles or unmanned aerial vehicles ~~capable of achieving~~ rated for a "range" equal to or greater tan 300 km and ~~their~~ subsystems "required" therefor

6B995
~~Specially designed or modified equipment, including~~ "Laser" manufacturing equipment "required" for the following (see List of Items Controlled) and tools, dies, fixtures, or gauges, and other ~~specially designed~~ components ~~and accessories~~ "required" therefor
Unit: Equipment in number; ~~parts and accessories~~ components in $ value.

6C992
Optical sensing fibers ... ~~modified structurally to have~~ rated for a 'beat length' ... or optical sensor materials, not ~~described in~~ controlled by 6C002.b, ~~and having~~ rated for a zinc content ...
Unit: ~~Equipment in number; parts and accessories in $ value~~ Kilograms

6C994
Unit: ~~Equipment in number; parts and accessories in $ value~~ Kilograms
Related Definitions: ... (2) ... have been ~~specially~~ processes for ~~use in fabricating~~ optical fibers
a.1 ... ~~containing ingredients with~~ rated for a purity ...
b 'Optical fiber preforms' made from bulk fluoride compounds ~~containing ingredients with~~ rated for a purity of 99.999% or better, ~~specially designed~~ "required" for the manufacture of 'fluoride fibers' controlled by 6A994.b.

6D001
"Software" ~~specially designed~~ "required" for ...
TSR: Yes, except for the following:
(2) "Software" ~~specially designed~~ for ...
(3) ... "software" ~~specially designed~~ for ...

(Repeating what is in the 6D002 item heading is redundant.)
Related Controls: "Software" ~~specially designed~~ defined in the USML for ... is subject to the export licensing authority of the Department of State ...

6D002
Software" ~~specially designed~~ "required" for the "use" ...
TSR:Yes, except ... (2) "Software" ~~specially designed~~ for ...
(Repeating what is in the 6D002 item heading is redundant.)
Related Controls: "Software" ~~specially designed~~ defined in the USML for ~~the "use" of~~ ... is subject to the export licensing authority of the Department of State ... See 6D991 for "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.

6D003 a.1
"Software" ~~specially designed~~ "required" for acoustic beam forming ...
a.2 "Source code" rated for the "real time processing" of acoustic data ...
a.3 "Software"~~ specially designed~~ "required" for acoustic beam forming ...
a.4 "Source code" rated for the "real time processing" of acoustic data ...
a.5 "Software" or "source code", ~~specially designed~~ "required" for ...
N.B. For diver determination "software" or "source code" ~~specially designed or modified for military use~~ defined in the USML, see the U.S. Munitions List
c "Software" ~~designed or modified~~ "required" for cameras incorporating "focal plane arrays" ~~specified~~ controlled by 6A002.a.3.f ~~and designed or modified~~ "required" to remove a frame rate restriction and allow the camera to exceed the frame rate ~~specified in~~ controlled by 6A003.b.4 Note 3.a. ...
f.1 ... ~~specially designed~~ "required"
f.2 ... ~~specially designed~~ "required"
f.3 ... ~~specially designed~~ "required" ...
f.4 ... ~~specified~~ controlled ...
g ... ~~specially designed~~ "required"
h.1 ... ~~designed~~ rated ... and ~~capable of~~ rated for ...
h.2 "Software" "required" ...
h.2.a ... ~~specially designed~~ "required"

6D102
"Software" ~~specially designed or modified~~ "required" for ...

6D103
"Software" ~~that processes~~ rated to process post-flight, recorded data~~, enabling~~ rated for ... ~~specially designed or modified~~ "required" for "missiles"

6D991

"Software" ~~specially designed~~ "required" for ...

6D992
"Software" ~~specially designed~~ "required" for ...

6D993,a
Air Traffic Control (ATC) "software" ...~~, and capable of~~ "required" for ...

6E001
TSR: Yes, except ...
(3) "Technology" for "software" ~~specially designed~~ for ... controlled by 6D001 or 6D002
(4)(b) Equipment controlled by 6A001.a.2.c or 6A001.a.2.f when ~~specially designed for real-time applications~~; or
(4)(c) "Software" controlled by 6D001 ~~and specially designed~~ for ...

6E002
TSR: Yes, except ...
(3)(b) Equipment controlled by 6A001.a.2.c or 6A001.a.2.f when ~~specially designed for real-time applications~~; or

6E003 d.2
Optical fabrication "technology" ~~using~~ "required" for ...
e Lasers. Technology" "required" for the "development", "production", or "use" of ~~specially designed~~ diagnostic instruments or targets in test facilities "required" for "SHPL" testing or testing or evaluation of materials irradiated by "SHPL" beams
(In the definition of "Super High Power Laser" change "capable of" to "rated for".)

6E101
Related Definitions: (1) This entry only controls "technology" for equipment controlled by 6A008 when it is ~~designed~~ rated for airborne applications and is ~~usable in~~ "required" for "missiles". (2) This entry only controls "technology" for items in 6A002.a.1, a.3, and .e that are ~~specially designed or modified~~ "required" to protect "missiles" against nuclear effects (e.g., Electromagnetic Pulse (EMP), X-rays, combined blast and thermal effects), and ~~usable~~ "required" for "misssiles".

6E991
"Technology""required" for ...

6E992
"Technology""required" for ...

6E993 a
Optical fabrication technologies "required" for ...

a.2 ... at the ~~designed~~ rated wavelength.:
b "Technology" "required" for optical filters ...
c "Technology" "required" for ...
d "Technology" "required" for ... "magnetometers" or ... "magnetometer" systems, ~~having~~ rated for any of the following:

EAR99
... ~~specified in~~ controlled by ...

Recapitulation

A. Specially designed

1. Limit controlled item to its controlled parameters (excluding components)
   - Change specially designed to "required" 6A001.a.1.c Note, a.2.a Note, a.2.c, a.2.f, 6A003.a, a.6.a, 6A004.d.4, 6A005.d.1 Note, 6A006.a.1.b, 6A008.g, 6A203.c, 6A998.b, 6B004.b, 6B108, 6C994.b, 6D001, 6D002, 6D003.a.1, a.3, a.5, f.1, f.2, f.3, g, h.2.a, 6D001, 6D002, 6D991, 6D992, 6E003.e
   - Change specially designed for use with to "required" 6A005.e.2, f.4.
   - Change specially designed having to rated for 6A992.a.2
   - Change specially designed to defined on the USML 6D001 Related Controls, 6D002 Related Controls
   - Delete specially designed 6A001 LVS (2x), 6A004 Related Controls, 6A005 Related Controls (4), 6A008.j.3 Note 1, 6D001 TSR (2), (3), 6D001 STA, 6D002 TSR (2), 6D002 Related Controls (2x), 6E001 TSR (3), (4)(b), (4)(c), 6E002 TSR (3)(b)
2. <u>Limit controlled components referred to as components</u>
   - Change specially designed to "required" 6A001.a, a.1, a.1.d, a.2, a.2 Note, 6A004.a.1, 6A005.f.3, 6A006, 6A008, 6A107, 6A107.b, 6A991, 6A992.a, 6A998, 6B008, 6B995
   - Delete specially designed 6A002.a.2, a.2.c, 6A203.a, 6A996, 6A998.a
3. <u>Limit controlled contained items not using the word components</u>
   - Delete specially designed (subsystems for SQUID systems) 6A006.a.1.a
   - Delete specially designed (tubes and devices for cameras) 6A203.b.4.d
4. <u>Limit what is excepted from control</u>
   - Change specially designed to "required" 6A108 Related Controls (1)(d)
   - Change specially designed to rated 6A001.a.1 Note b.2, 6A001.b Note 2, 6A002.c Note, d.3 Note, 6A003.b.2 Note, Note b, b.4.b Note 3.c, b.4.c Note 4.a.1, Note 4.c.1.b, Note 4.b, 6A006 Related Controls, 6A008.i Note b, j Note b.2
   - Delete specially designed 6A003.b.4.c Note 4.a.2.b, Note 4.b.1.b

B Specially designed or modified

1. <u>Limit controlled item to its controlled parameters (excluding components)</u>
   - Change specially designed or modified to "required" 6A001.a.1.e, 6A001.a.1.e N.B., 6A002.a.2.a.2.b, a.2.b.2.b, a.2.c.2, a.3.a.2.b, a.3.b.2.b, a.3,.g.2, 6A102, 6B995, 6D102, 6D103, 6E101 Related Definition (2)
   - Change specially designed or modified or configured to as defined on the USML 6A002 Related Controls
   - Change specially designed or modified to as defined on the USML 6D003.a.5 NB
   - Delete specially designed or modified 6A003 Related Controls (3), 6A108 Related Controls (2)
4. <u>Limit what is excepted from control</u>
   - Delete specially designed or modified 6A002.a.3 Note 2.c, 6A003 Note 4.c.3

C. Specially designed or prepared

1. Limit controlled item to its controlled parameters (excluding components)

Change specially designed or prepared to as defined by NRC 6A005 Related Controls (5)

Change specially designed or prepared for use in to as defined by NRC 6A205 Related Controls (4)

D Designed or modified

1. Limit controlled item to its controlled parameters (excluding components)

Change designed or modified for use in to "required" for 6A108.a

Change designed or modified to "required" 6D003.c (2x)

Change designed or modified to rated 6A001.a.1.a.2.a, a.1.a.3.a, 6A005.d.1.e Note 1, Note 2, 6A007.a, 6A107.a,

Change modified structurally to have to rated for 6C992.g

4. Limit what is excepted from control

Delete designed or modified 6A002.b.1 Note a, b

E. Usable in or capable of

1. Limit controlled item to its controlled parameters (excluding components)

Change usable to "required" 6A002, 6A102, 6A103, 6A107.a

Change usable in to "required" for 6A103, 6A108.b, 6E101 Related Definition (1)

Change capable of to "required" for 6A004.a.1, 6D993.a

Change using to "required" 6E003.d.2

Change usable to "required" 6E101 Related Definition (2)

Change capable of to rated for 6A001.a.1.d Note b, a.2.e.2.b**,** 6A003.a.1, a.2**,** 6A004.d.3.d.1, 6A005.f.2, 6A008.c, d, f, 6A203.b.1, b.3, 6A991, 6D003.h.1

Change capable of achieving to rated for 6A108.b, 6B108

Change capabilities to rated for 6A108.b.2

Change enabling to rated for 6D103

Change capable of to with 6A004.d.3.d.2

Change capable of to as defined in the USML 6A005 Related Controls (6)

Delete capabilities 6A004.e

Delete usable in 6A008 MT applies

Delete usable 6B108

Delete capable of 6A995.d.2.a.1

3. Limit controlled contained items not using the word components

Change used with to "required" (tubes and devices for cameras) 6A203.b.4

F. Designed

1. Limit controlled item to its controlled parameters (excluding components)

Change designed to "required" 6A006.a.1.a, a.1.b

Change designed to rated 6A001.a.1.a.1, a.1.a.1.a, a.1.a.1.b, a.1.a.2, a.1.a.3, a.1.b.5, a.1.b.6, a.1.d, a.2.a.5, a.2.a.6, a.2.b.2, a.2.d.2, a.2.e.2.a, b, b.1.a, 6A002.b, b.2.b.2, 6A004.c.3, 6A007.b, 6A008.j.3, 6A103, 6A205.e,

6A996.b.1, b.2, b.3.b, b.3.c, 6D003.h.1, 6E101 Related Definition (1), 6E993.a.2

Change designed of manufactured with the intent to rated 6A004.e.2 Technical Note

Change limited by design to rated for 6A005.b.6.b.1.d, f.1

Delete designed 6A001.a.1.c, 6A008 MT applies, 6A102, 6A992 RS applies, 6A999 AT applies

2. Limit controlled components referred to as components

Change designed to rated 6A005.f.3

3. Limit controlled contained items not using the word components

Delete designed (subsystems for SQUID systems) 6A006.a.1.a

4. Limit what is excepted from control

Change designed to rated 6A003.a.1 Note, 6A003.b.4.b Note 3.b.4.b (2x), b.4.c Note 4.a.1, 6A008.l.4 Note

Delete designed 6A002.a.2.c.3 Note, a.3 Note c.1, a.3 Technical Note, 6A003.b.4.c Note 4.c.1, 6A005.d.1.e Note 3

Delete design 6A002.a, e Note 2.c, 6A003.b.4.c Note 4.c

G Miscellaneous expressions

1. Limit controlled item to its controlled parameters (excluding components)

Change specified to rated 6A001.a.1.e Note, 6A008.b Technical Note

Change related to rated 6A001.a.2 Note

Change being specified to rated 6A002.b.2

Change having to rated for 6A205.a, b, d, f, 6A992.a.1, 6A995.a, b.1, b.2, c, d, e, f, 6A996.a, b.3, b.3.d, 6A997.a, 6B004.b, 6B008, 6C992, 6E993.d

Change with to rated for 6C994

Change containing ingredients with to rated 6C994

Change specified to controlled 6A005.d.1.e Note 1 (2x), Note 2 (2x), 6A006.e, 6A008.j Note 1, 6D001 STA, 6D003.c (2x), 6D003.f.4, EAR99

Change specifically designed,, modified, or configured for military application to as defined in the USML 6A005 Related Controls (6)

Delete specialized 6A108 Related Definitions

Delete associated 6A108.b.2

Delete having 6A205.b.2

Delete specially 6C994 Related Definitions

2. Limit controlled components referred to as components

Change special support to “required” 6A002.d

Change specially fabricated to “required” 6A002.d.3

3. Limit controlled contained items not using the word components

Change parts and accessories to components 6A991 Unit

Delete parts and accessories 6A203 Unit, 6A225 Unit, 6A226 Unit, 6A992 Unit, 6A994 Unit, 6A995 Unit, 6B995 Unit, 6C992 Unit, 6C994 Unit, 6D993 Unit

Delete accessories 6B995

4. <u>Limit what is excepted from control</u>

Change configured so that ... can to rated to 6A008.i Note b.2
Change limited to to rated for 6A001.a.1 Note a, b Note 1
Change required to needed 6A005.a.6.b Note
Change defined in to controlled by 6A006 LVS
Delete limited solely 6A002.a.2 Note
Delete limited 6A002.a.3 Note 2.c

H Replace absence of any expression

1. <u>Limit controlled item to its controlled parameters (excluding components)</u>

Add “required” 6E991, 6E992, 6E993.a, b, c
Add rated 6A225, 6A226.a, b, 6A997, 6B004.a, 6B007, 6D003.a.2, a.4, 6D103

2. <u>Limit controlled components referred to as components</u>

Add components 6A992 Unit, 6B995 Unit

3. <u>Limit controlled contained items not using the word components</u>

Add “required” (tubes for cameras) 6A203.b.2
Add “required” (subsystems for systems) 6B108

July 17, 2012

Specially Designed Issues CCL Category 7

7A001

Accelerometers, as follows ... and ~~specially designed~~ components "required" therefor:

Related Controls: ...~~MT controls do not apply to accelerometers that are specially designed and developed as Measurement While Drilling (MWD) sensors for use in downhole well service applications.~~

(Such accelerometers are excluded from 7A101 and are thus excluded from the 7A001 MT applies entry)

a.1 ~~Specified to function at~~ Rated for linear acceleration ... and ~~having~~ rated for any of the following:

a.2 ~~Specified to function at~~ Rated for linear acceleration ... and ~~having~~ rated for any of the following:

a.3 ~~Designed for use in~~ Rated for inertial navigation or guidance systems and ~~specified to function at~~ for linear acceleration levels ...

Note: 7A001.a.1 and 7A001.a.2 do not apply to accelerometers ~~limited to~~ rated for

b ... ~~specified to function at~~ rated for linear acceleration ...

7A002

Gyros ... and ~~specially designed~~ components "required" therefor:

a ~~Specified to function at~~ Rated for linear acceleration ... and ~~having~~ rated for ...

a.1 ... and ~~having~~ rated for ...

a.2 ... and ~~having~~ rated for

b. ~~Specified to function at~~ Rated for linear acceleration levels exceeding 100 g

7A003

Inertial systems and ~~specially designed~~ components therefor, as follows

Related Controls:... Inertial Navigation Systems (INS) and inertial equipment, and ~~specially designed~~ components therefor~~, specifically designed, modified or configured for military use~~ as defined in the USML are subject to the export licensing authority of the U.S. Department of State, Directorate of Defense Trade Controls. (See 22 CFR part 121.)

a. ... ~~designed~~ rated for ...and ~~having~~ rated for any of the following and ~~specially designed~~ components "required" therefor

a.2 ~~Specified to function at~~ Rated for linear acceleration levels exceeding 10 g

b. ... and ~~having~~ rated for

c. ... and ~~having~~ rated for any of the following, and ~~specially designed~~ components "required" therefor

c.1 ~~Designed to have~~ ...

c.2 ~~Designed to have~~

Note 1: The parameters of 7A003.a and 7A003.b are applicable ~~with~~ if rated for any of the following ...

b An angular rate ~~capability~~ about one or more axes ...

Note 3. 7A003.c.1 does not control theodolite systems incorporating inertial equipment ~~specially designed~~ rated for ~~civil~~ surveying purposes.

7A004

a ... ~~with a specified~~ rated for an azimuth accuracy ...

b Components ~~specially designed~~ for equipment ~~specified in~~ controlled by 7A004.a as follows:

7A005

... and ~~specially designed~~ components "required" therefor.....

7A006

Airborne altimeters ~~operating at~~ rated for frequencies ... and ~~having~~ rated for ...

7A008

Underwater sonar navigation systems ... ~~having~~ rated for a positioning accuracy ... and ~~specially designed~~ components "required" therefor.

Related Controls: 7A008 does not control systems ~~specially designed~~ rated for ...

7A101

Accelerometers, other than those controlled by 7A001, as follows (see List of Items Controlled), and ~~specially designed~~ components "required" therefor

Related Controls: This entry does not control accelerometers ~~which are specially designed and developed as~~ rated for MWD ... for ~~use in~~ downhole well service operations.

a. Linear accelerometers ~~designed for use in~~ "required" for inertial navigation systems or ~~in~~ guidance systems ~~of all types, usable in~~ "required" for "missiles" ~~having~~ and rated for all of the following ~~characteristics, and specially designed components therefor:~~

(Components are covered by the heading.)

b Accelerometers ~~of any type, designed~~ "required" for ~~use in~~ inertial navigation systems or ~~in~~ guidance systems ~~of all types, specified to function~~ at rated for acceleration levels greater than 100 g.

Note: This paragraph (b) does not include accelerometers ~~that are designed~~ rated to measure vibration or shock.

7A102

Gyros ..., and ~~specially designed~~ components "required" therefor.

a. ~~All types of~~ gyros~~, usable in~~ "required" for rockets, missiles, or unmanned aerial vehicles ~~capable of achieving~~ rated for a "range" ...

b Gyros of any type~~, designed for use in~~ "required" for inertial navigation systems or ~~in~~ guidance systems ~~of all types, specified to function at~~ rated for acceleration levels greater than 100 g.

7A103

... and ~~specially designed~~ components "required" therefor
Related Controls: ... (2) Inertial navigation systems and inertial equipment, and ~~specially designed~~ components therefor ~~specifically designed, modified or configured for military use~~ as defined in the USML are subject to the export licensing authority of the U.S. Department of State ...

a Note 1. 7A103.a does not control equipment containing accelerometers ~~specially designed and developed as~~ rated for MWD ... sensors for ~~use in~~ down-hole well ...

b Integrated flight instrument systems, which include gyrostabilizers or automatic pilots, ~~designed or modified for use in~~ "required" for ~~rockets,~~ missiles, other rockets, or unmanned aerial vehicles ~~capable of achieving~~ rated for a "range" equal to or greater than 300 km.

c Integrated Navigation Systems, ~~designed or modified for use in~~ "required" for ~~rockets,~~ missiles, other rockets, or unmanned aerial vehicles ~~capable of achieving~~ rated for a "range" equal to or greater than 300 km and ~~capable of providing~~ for a navigational accuracy of 200m Circular Error Probable (CEP) or less

7A104
... and ~~specially designed~~ components "required" therefor.
Related Controls: ~~This entry controls specially designed components for gyro-astro compasses and other devices controlled by 7A004.~~ N/A
(7A004.b controls components for 7A004.a.)

7A105 ... and ~~specially designed~~ components "required" therefor.

1 ~~Designed or modified for use in~~ "required" for "missiles"; or

2 ~~Designed or modified~~ "required" for airborne applications ...

2.a ~~Capable of providing~~ rated for navigation information at speeds ...

2.b Employing decryption~~, designed or modified~~ "required" for ~~military or governmental services to gain~~ access to GNSS secured signal/data

2.c Being ~~specially designed to employ~~ required" for anti-jam features...

7A106
Altimeters ... ~~designed or modified for use in~~ "required" for ...

7A107
... and ~~specially designed~~ components "required" therefor.

b ~~Capable of prviding~~ Rated for azimuthal accuracy .....

c ~~Designed or modified to be integrated with~~ Rated for integration into flight control ~~and~~ or navigation systems.

7A115
Passive sensors ..., ~~designed or modified for use in~~ "required" for "missiles".

7A116
Flight control systems ... ~~designed or modified~~ "required" for "missiles".

7A117“
Guidance sets” ~~capable of achieving~~ rated for system accuracy of ...

7A994
... ~~parts and~~ components~~, n.e.s.~~ “required” therefor
Related Controls: ... ~~described in~~ controlled by ... (4x) Technology ~~specific to~~ “required” for the development ~~and~~ or production of QRS11 ...

7B001
... equipment~~, specially designed~~ “required” for equipment controlled by 7A (except 7A994)
Related Definition: ... is tested ~~by various appropriate means~~ ...

7B002
Equipment ~~specially designed~~ “required” to characterize mirrors for ring “laser” gyros, as follows ...

7B003
Equipment ~~specially designed~~ “required” for the “production” of ...

7B101
... other than that ~~described in~~ controlled by 2B119 to 2B122, 7B001 to 7B003 ~~and~~ or 7B102 ~~designed or modified to be used with~~ “required” for equipment controlled by ...

7B102
...~~designed or modified~~ “required” to characterize mirrors for laser “laser” gyro equipment, as follows ...
a Scatterometers ...
c Profilometers ...
(7B102.a and .c are covered by 7B002.a and .b.)

7B103
~~Specially designed~~ “production facilities” “required” for “production facilities” for equipment controlled by 7A117. ~~(These items are subject to the export licensing authority of the U.S. Department of State, Directorate of Defense Trade Controls. See 22 CFR part 121.)~~
(When 9B116 was returned to Commerce jurisdiction, 7B103 was overlooked.)

7D001
“Software” ~~specially designed or modified~~ “required” for ...
~~MT applies ...~~
(MTCR 9D covers only use and integration software, see 9D101 and 9D102.)
~~RS applies to “software” for inertial navigation systems, inertial equipment, and specially designed components therefor, for “civil aircraft”~~
(The RS applies description is much broader than 7D001. It is unclear what portion, if

any, of that description is covered by 7D001.)

Related Controls: ... ~~(2) The "software" related to 7A003.b , 7A005, 7A103.b, 7A105, 7A106, 7A115, 7A116, 7A117, or 7B103 are subject to the export licensing authority of the U.S. Department of State ... (3) "Software" for inertial navigation systems and inertial equipment, and specially designed components therefor, not for use on civil aircraft are subject to the export licensing authority of the U.S. Department of State ...~~

(It is clear that use software for USML items is, and will continue to be, ITAR controlled. But 7D001 covers only development and production software. It is not at all clear that the ECR intends ITAR control of development or production software, except in narrowly defined areas such as production of low observable components or portable platform signature field repair validation equipment, per May 18, 2012, proposed rule for XIII.l as it relates to XIII.k.)

7D002

"Source code" "required" for ...

7D003

a "Software" ~~specially designed or modified~~ "required" to improve ...
b "Source code" "required" for ...
c "Source code" "required" for ...
d "Source code" "required" for ...
e Computer-Aided-Design (CAD) "software" ~~specially designed~~ "required" for ...

7D101

"Software" ~~specially designed or modified~~ "required" for ...

Related Controls:(1) The software ~~related to~~ for 7A003.b ... 7A117 ~~or 7B103~~ as defined in the USML are subject to the export licensing authority of the U.S. Department of State ... (2) "Software" as defined in the USML for inertial navigation systems and inertial equipment, and ~~specially designed~~ components therefor, not ~~designed~~ for ~~use on~~ "civil aircraft" certified by civil aviation authorities of a country listed in ~~Country Group A:1~~ 743 Supplement 1 is subject to the export licensing authority of the U.S. Department of State, ...

7D102

Related Controls: The "software" ~~related to~~ for 7A003.b or 7A103.b as defined in the USML are subject to the export licensing authority of the U.S. Department of State ...

a Integration "software"required" for ... 7A103,b.
b Integration "software" ~~specially designed~~ "required" for ... 7A003 or 7A103.a.

7D103

"Software" ~~specially designed~~ "required" for modelling or simulation ... or for their ~~design~~ integration with "missiles".

7D994

"Software.,~~n.e,s.~~, "required" for ...

7E001
MT applies to ... ~~specified in~~ controlled by ...
~~RS applies to "software" for inertial navigation systems, inertial equipment, and specially designed components therefor, for civil aircraft~~

(The RS applies description is much broader than 7E001. It is unclear what portion, if any, of that description is covered by 7E001.)

Related Controls: ... (2) The "technology" ~~related to~~ for 7A003.b ... 7A117, ~~or 7B103 software in 7D101 specified in Related Controls paragraph of ECCN 7D101, 7D102.a,~~ or 7D103 or the USML portions of 7D101 or 7D102, as defined in the USML are subject to the export licensing authority of the U.S. Department of State ...

7E002
MT applies to ... ~~specified in~~ controlled by ...
~~RS applies to "software" for inertial navigation systems, inertial equipment, and specially designed components therefor, for civil aircraft~~

(The RS applies description is much broader than 7E002. It is unclear what portion, of any, of that description is covered by 7E002.)

Related Controls: ...(2) The "technology" ~~related to~~ for 7A003.b ... 7A117, ~~or 7B103~~ as defined in the USML are subject to the export licensing authority of the U.S. Department of State ...

7E003
Related Controls: ... This entry does not control maintenance "technology" ~~directly associated with~~ rated for calibration , removal, or replacement of ...

7E004
a. "Technology" "required" for the "development" of ...
a.1 ... ~~operating at~~ rated for frequencies ...
a.5 Electric actuators ... ~~specially designed~~ rated for "primary flight control";
a.6 "Flight control optical sensor array" ~~specially designed~~ rated for...
a.7 "DBRN" systems ~~designed~~ rated to navigate underwater ...
b.3 Note: 7E004.b.3 does not control "technology" for ~~the design of~~ physical redundancy
c.3 Rotor blades incorporating "variable geometry airfoils", for ~~use in~~ systems ~~using~~ rated for individual blade control.

7E101
~~RS applies to "software" for inertial navigation systems, inertial equipment, and specially designed components therefor, for "civil aircraft"~~

(The RS applies description is much broader than 7E101. It is unclear what portion, of any, of that description is covered by 7E101.)

Related Controls: The "technology" ~~related to~~ for 7A003.b ... 7A117, ~~7B103, software specified in the Related Controls paragraphy of ECCN 7D101, 7D102.a,~~ or 7D103 or the USML portions of 7D101 or 7D102, as defined in the USML are subject to the export licensing authority of the U.S. Department of State ...

7E102
"Technology" "required" for the "development" of protection of avionics ..., as follows
a ~~Design~~ "technology" for shielding systems
b ~~Design~~ "technology" for the configuration of hardened electrical circuits ...
c ~~Design~~ "technology" for the determination of hardening criteria ...

7E104
~~Design~~ "Technology" "required" for the "development" of integration of ... data into a ... system ~~designed or modified~~ "required" for "missiles" ~~for optimization of rocket system~~ trajectory.

7E994
"Technology", n.e.s., "required" for...
Related Controls: Technology ~~specific to~~ for ... QRS11 sensors as defined in the USML remains subject to the licensing jurisdiction of the Department of State ...

EAR99
... ~~specified in~~ controlled by ...

Recapitulation

A. Specially designed

1. Limit controlled item to its controlled parameters (excluding components)
   - Change specially designed to "required" 7A105.2.c, 7B001, 7B002, 7B003, 7B103, 7D003.e, 7D102.b, 7D103
   - Change specially designed to rated 7E004.a.5, a.6
   - Change specially designed and specifically designed, modified or configured for military use to as defined in the USML 7A003 Related Controls, 7A103 Related Controls
   - Change specially designed to as defined in the USML 7D001 Related Controls, 7D101 Related Controls
   - Delete specially designed and developed 7A001 Related Controls
2. Limit controlled components referred to as components
   - Change specially designed to "required" 7A001, 7A002, 7A003.a,c, 7A005, 7A008, 7A101, 7A102, 7A103, 7A104, 7A104 Related Controls, 7A105, 7A107, 7A994
   - Delete specially designed 7A003.a, c, d, 7A004.b, 7A101.a, 7D001 RS applies, 7D001 Related Controls (3), 7D101 Related Controls (2), 7E001 RS applies, 7E002 RS applies, 7E101 RS applies
4. Limit what is excepted from control
   - Change specially designed to rated 7A003 Note 3, 7A103.a Note 1
   - Change specially designed and developed as to rated for 7A101 Related Controls, 7A103.a Note 1

B Specially designed or modified

1. Limit controlled item to its controlled parameters (excluding components)
   - Change specially designed or modified to "required" 7D001, 7D003.a, 7D101

D Designed or modified

1. Limit controlled item to its controlled parameters (excluding components)
   - Change designed or modified for use in to "required" for 7A103.b, c, 7A105.1
   - Change designed or modified to "required" 7A105.2, 2.b, 7A106, 7A115.d, 7A116, 7B101, 7B102, 7E104
     - Change designed or modified to rated 7A107.c

E. Usable in or capable of

1. Limit controlled item to its controlled parameters (excluding components)
   - Change usable in to "required" 7A101.a, 7A102.a
   - Change capable of achieving to rated 7A102.a, 7A103.b, c, 7A117
   - Change capable of to rated for 7A105.2.a, 7A107.b
   - Change using to rated 7E004.c.3
   - Delete capability 7A003 Note 1.b

F. Designed

1. Limit controlled item to its controlled parameters (excluding components)
    - Change designed for use in to “required” 7A101.a, b, 7A102.b
    - Change designed for use in to rated for 7A001.a.3
    - Change designed to rated 7A003.a, 7E004.a.7
    - Change design to development 7E102, 7E104
    - Change designed to certified 7D101 Related Controls (2)
    - Delete designed 7A003.c.1, c.2
    - Delete design 7D103, 7E102.a, b, c
4. Limit what is excepted from control
    - Change designed to rated 7A101.b Note
    - Delete design 7E004.b.3

G Miscellaneous expressions

1. Limit controlled item to its controlled parameters (excluding components)
    - Change specific to “required” 7A994 Related Controls
    - Change directly associated with to rated for 7E003 Related Controls
    - Change specified to rated 7A004.a
    - Change specified to function at to rated for 7A001.a.1, a.2, a.3, b, 7A002.a, b, 7A003.a.2, 7A101.b, 7A102.b
    - Change having to rated 7A001.a.1, a.2, 7A002.a, a.1, a.2, 7A003.a, b, c, 7A006, 7A008, 7A101.a
    - Change with to if rated for 7A003 Note 1
    - Change operating at to rated for 7A006, 7E004.a.1
        - Change related to as defined on USML 7D101 Related Controls (1), 7E001 Related Controls, 7E002 Related Controls, 7E101 Related Controls
    - Change specific to as defined in the USML 7E994 Related Controls
    - Change specified to controlled 7E001 MT applies, 7E002 MT applies, EAR99
    - Change specified to USML portions 7E001 Related Controls, 7E101 Related Controls
    - Change described to controlled 7A994 Related Controls (4x), 7B101
    - Delete related 7D001 Related Controls (2), (3)
    - Delete optimization 7E104
3. Limit controlled contained items not using the word components
    - Delete parts 7A994

H **Replace absence of any expression**

1. Limit controlled item to its controlled parameters (excluding components)
    - Add “required” 7D002, 7D003.b, c, d, 7D102.a, 7D994, 7E004.a, 7E102, 7E104, 7E994
    - Add as defined in the USML7D101 Related Controls, 7D102 Related Controls, 7E001 Related Controls, 7E002 Related Controls, 7E101 Related Controls

July 17, 2012

Specially Designed Issues CCL Category 8

8A001

a. Manned, untethered submersible vehicles ~~designed~~ rated to operate at depths ...

b Manned, untethered submersible vehicles ~~having~~ rated for any of the following

b.1 ~~Designed~~ to 'operate autonomously' and ~~having~~ for a lifting capacity of all the following:

b.2 ~~Designed~~ to operate at depths exceeding 1,000 m; or

b.3 ~~Having~~ all of the following:

b.3.a ~~Designed~~ to continuously 'operate autonomously' for 10 hours or more; and

(Rated in ,b substitutes for designed or having in b.2,3.)

b Technical Note: ... ~~can safely control~~ safely controls ...

c Unmanned, tethered submersible vehicles ~~designed~~ rated to operate at depths exceeding 1,000 m and ~~having~~ for any of the following

c.1 ~~Designed for~~ self-propelled maneuver using propulsion motors

(Rated in .c substitutes for designed in c.1.)

d Unmanned, untethered submersible vehicles ~~having~~ rated for any of the following

d.1 ~~Designed for~~ deciding a course

(Rated in .d substitutes for designed in d.1.) ...

e Ocean salvage systems ~~with~~ rated for a lifting capacity ... and ~~having~~ for any of the following:

e.1 Dynamic ~~positioning systems capable of~~ position keeping within 20 m of a given point ...

(Rated in .e substitutes for capable of in e.1.)

f Surface-effect vehicles (fully skirted ~~variety~~) ~~having~~ rated for all of the following:

f.1 Maximum ~~design~~ speed ...

(Rated in .f substitutes for design in f.1.)

g Surface-effect vehicles (rigid sidewalls) ~~with~~ rated for a maximum ~~design~~ speed

h Hydrofoil vessels ~~with active systems~~ rated for automatically controlling foil systems, ~~with~~ and for a maximum ~~design~~ speed ...

i 'Samall water plane area vessels' ~~having~~ rated for any of the following:

i.1 Full load displacement exceeding 500 tonnes ~~with~~ and a maximum ~~design~~ speed

i.2 Full load displacement exceeding 1,500 tonnes ~~with~~ and a maximum ~~design~~ speed

(Rated in .i substitutes for design in i.1,2.)

i Technical Note: ... operational ~~design~~ rated draft ...

8A002

Related Controls: ... (3) ... ~~specially designed or modified~~ for ... ~~specified~~ controlled ... (4) ... ~~specially designed or modified~~ for ... ~~specified~~ controlled ...

a Systems, equipment, and components ~~specially designed or modified~~ "required" for submersible vehicles and ~~designed~~ rated to operate ..., as follows:

a.4 ... material ~~specified~~ controlled by ...

b Systems specially ~~designed or modified~~ "required" for the automated control of the motion of submersible vehicles controlled by 8A001, using navigation data, ~~having~~ rated for closed loop servo-controls and ~~having~~ for any of the following:

b.1 ~~Enabling a vehicle to~~ move within 10 m ...

(Rated in .b substitutes for enabling in b.1.)

d.1.a Television systems ... ~~having~~ rated for a 'limiting resolution' ... and ~~specially designed or modified~~ for remote operation ...

d.1.b Underwater television cameras ~~having~~ rated for a 'limiting resolution' ...

d.1.c Low light level television cameras ~~specially designed or modified~~ rated for underwater use and ~~having~~ for all of the following

d.2 Systems ~~specially designed or modified~~ rated for remote operation ...

e Photographic still cameras ~~specially designed or modified~~ rated for underwater use below 150 m, ~~with~~ for a film format of 35 mm or larger, and ~~having~~ for any of the following:

e.3 Automatic compensation control ~~specially designed to permit~~ for an underwater camera housing ~~to be usable~~ at depths exceeding 1,000 m

(Rated in .e substitutes for specially designed and usable in e.3.)

g Light systems ~~specially designed or modified~~ rated for underwater use, as follows:

g.1 Stroboscopic light systems ~~capable of~~ rated for a light output energy ...

g.2 Argon arc light systems ~~specially designed~~ rated for ~~use~~ below 1,000 m

h "Robots" ~~specially designed~~ rated for underwater use, computerized controlled ~~by using a dedicated computer~~ and ~~having~~ any of the following

h.2 ~~The ability to exert~~ Exertion of a force of 250 N or more, and ~~using~~ titanium based alloys or "composite" "fibrous or filamentary materials" in their structural members

(Rated in .h substitutes for ability and using in h.2.)

i Remotely controlled articulated manipulators ~~specially designed or modified~~ rated for ~~use with~~ submersible vehicles and ~~having for~~ any of the following

i.2 Controlled by proportional master-slave or computerized techniques ~~or by using a dedicated computer~~, and ~~having~~ 5 degrees of 'freedom of movement' or more

(Rated in .i substitutes for using and having in i.2.)

Technical Note: Only functions having proportional control ~~using~~ positional or computerized feedback ~~or by using a dedicated computer~~ are counted when determining the number of degrees of 'freedom of movement

j Air independent power systems ~~specially designed~~ rated for underwater use, as follows

j.1 Brayton or Rankine cycle engine air independent power systems ~~having~~ rated for any of the following:

j.1.a Chemical scrubber or absorber systems ~~specially designed~~ to remove carbon dioxide, carbon monoxide and particulates ...

j.1.b ~~Systems specially designed to use~~ a monoatomic gas ...

j.1.c ~~Devices or enclosures, specially designed for~~ underwater noise reduction ... or ~~special~~ mounting devices ~~for~~ shock mitigation; or

j.1.d Systems ~~having~~ with all of the following:

j.1.d.1 ~~Specially designed~~ to pressurize the products of reaction or for fuel reformation;

j.1.d.2 ~~Specially designed~~ to store the products of the reaction; and

j.1.d.3 ~~Specially designed~~ to discharge the products of the reaction...

(Rated in j.1 substitutes for specially designed, special, having in j.1.a-d.)

j.2 Diesel cycle engine air independent systems ~~having~~ rated for all of the following:

j.2.a Chemical scrubber or absorber systems, ~~specially designed~~ to remove ...

j.2.b ~~Systems specially designed to use~~ a monoatomic gas;

j.2.c ~~Devices or enclosures, specially designed for~~ underwater noise reduction in frequencies below 10 kHz, or ~~special~~ mounting devices ~~for~~ shock mitigation; and

j.2.d ~~Specially designed~~ exhaust systems that do not exhaust continuously the products of combustion;

(Rated in j.2 substitutes for specially designed or special in j.2.a-d.)

j.3 Fuel cell air independent power systems ~~with~~ rated for an output exceeding 2 kW and ~~having~~ for any of the following

j.3.a ~~Devices of enclosures, specially designed for~~ underwater noise reduction in frequencies below 10 kHz, or ~~special~~ mounting devices ~~for~~ shock mitigation; or

j.3.b Systems ~~having~~ for all of the following:

j.3.b.1 ~~Specially designed~~ to pressurize

j.3.b.2 ~~Specially designed~~ to store

j.3.b.3 ~~Specially designed~~ to discharge

(Rated in j.3 substitutes for specially designed, special, and having in j.3.a,b.).

j.4 Stirling cycle engine air independent power systems ~~having~~ rated for all of the following

j.4.a ~~Devices or enclosures, specially designed for~~ underwater noise reduction in frequencies below 10 kHz, or ~~special~~ mounting devices ~~for~~ shock mitigation; and

j.4.b ~~Specially designed exhaust systems which~~ discharge the products of combustion against a pressure of 100 kPa or more

(Rated in j.4 substitutes for specially designed in j.4.a,b.)l

k Skirts, seals and fingers, ~~having~~ rated for any of the following

k.1 ~~Designed for~~ cushion pressures of 3,830 Pa or more~~, operating~~ in a significant wave height of 1.25 m (Sea State 3) or more and ~~specially designed~~ for surface effect vehicles (fully skirted ~~variety~~)...

k.2 ~~Designed for~~ cushion pressures of ... and ~~specially designed~~ for surface effect vehicles (rigid sidewalls) ...

(Rated in .k substitutes for designed, operating, and specially designed in k.1,2.)

l Lift fans rated at more than 400 kW and ~~specially designed~~ "required" for surface effect vehicles ...

m ... hydrofoils, ~~specially designed~~ "required" for vessels controlled by 8A001.h

n Active systems ~~specially designed or modified~~ "required" to control automatically the sea-induced motion of vehicles or vessels

o.1 Water-screw propeller or power transmission systems, ~~specially designed~~ "required" for surface effect vehicles ... as follows:

o.1.c Systems ~~employing~~ rated for pre-swirl or post-swirl techniques, for smoothing the flow into a propeller;

o.1.e Power transmission shaft systems incorporating "composite" material components ~~and capable of~~ rated for transmitting more than 1 MW;

o.2 Water-screw propeller, power generation systems or transmission systems, ~~designed~~ rated for ~~use on~~ vessels, as follows:

o.2.b Internally liquid-cooled electric propulsion engines ~~with~~ rated for a power output

exceeding 2.5 MW,

o.2.c "Superconductive" propulsion engines or permanent magnet electric propulsion engines, ~~with~~ rated for a power output exceeding 0.1MW

o.2.d Power transmission shaft systems incorporating "composite" material components ~~and capable of~~ rated for transmitting more than 1 MW;

o.3 Noise reduction systems ~~designed~~ rated for ~~use on~~ vessels of 1,000 tonnes displacement or more, as follows

o.3.a Systems that attenuate underwater noise ....~~specially designed~~ "required" for sound or vibration isolation and ~~having~~ rated for an intermediate mass exceeding 30% of the equipment to be mounted;

o.3.b Active noise reduction or cancellation systems, or magnetic bearings, ~~specially designed~~ "required" for ...

Technical Note: ... ~~capable of~~ rated for actively reducing equipment vibration ...

p Pumpjet propulsion systems ~~having~~ rated for ..

p.2 ~~Using~~ divergent nozzle and flow conditioning vane techniques ....

(Rated in .p substitutes for using in p.2.)

r Diver deterrent acoustic systems ~~specially designed or modified~~ "required" to ...

8A609

Unit: ... ~~parts~~ ...

Related Controls: (1) Surface vessels of war and ~~special~~ naval equipment, ~~and technical data (including software), and services directly related thereto,~~ software, and technology described in 22 CFR part 121, Category VI~~, Surface vessels of war and Special Naval Equipment,~~ are subject to the jurisdiction of the International Traffic in Arms Regulations ...

a Surface vessels of war ~~"specially designed"~~ "required" for a military use, not enumerated in the USML, as follows

~~Note: 6A609.a includes~~

a.1 Underway replenishment ships;

a.2 Surface vessel and submarine tender and repair ships;

a.3 Non-submersible submarine rescue ships;

a.4 Other auxiliaries ACDS, AGF, AGM, AGOR, AGOS, AH, AP, ARL, AVB, AVM, and AVT

a.5 Armored amphibious ~~warfare~~ craft except those that are armed; or

a.6 Unarmored abd unarmed coastal, patrol, roadstead, and Coast Guard and other patrol craft with mounts or hard points for firearms of .50 caliber or less.

x Option I

~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" for a commodity enumerated in ECCN 8A609.a or for a defense article enumerated in USML Category VI and not elsewhere specified on the USML or the CCL

Option II

~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" for a commodity enumerated in ECCN 8A609.a or for a defense article enumerated in USML Category VI except (b-3,4,5 carve-

outs) and not elsewhere specified on the USML or the CCL

Option III

~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" "required" for a commodity enumerated in ECCN 8A609.a or for a defense article enumerated in USML Category VI and not elsewhere specified on the USML or the CCL and all "parts," "components," "accessories," or "attachments" for a commodity enumerated in ECCN 8A609 or for a defense article enumerated in USML Category VI accompanied by technology to assemble them into such a commodity or such an article

Note 2: ~~"Parts,"~~ "components," ~~"accessories and attachments"~~ specified in USML subcategory VI~~(g)~~ (f) are subject to the controls of that paragraph. ~~"Parts,"~~ "components," "accessories and attachments" specified in ECCN 8A609.y are subject to the controls of that paragraph.

y Specific ~~"parts,"~~ "components," "accessories," and "attachments" ~~"specially designed"~~ for a commodity subject to control in this ECCN or for a defense article in USML Category VI and not elsewhere specified on the USML or the CCL, as follows:

8A620

Unit: ... ~~parts~~ ...

Related Controls: (1) Submersible and semi-submersible vessels, oceanographic and associated equipment, ~~and technical data (including software), and services directly related thereto,~~ software, and technology described in 22 CFR part 121, Category XX~~, Submersible Vesssels, Oceanographic and Associated Equipment,~~ are subject to the jurisdiction of the International Traffic in Arms Regulations ...

a Surbmersible and semi-submersible vessels ~~"specially designed"~~ "required" for a military use, not enumerated in the USML, as follows

~~Note: 6A620.a includes~~

a.1 Deep Submergence Rescue Vehicles (DSRV);

a.2 Deep Submergence Vehicles (DSV)

b Submersible and semi-submersible vessels ~~"specially designed"~~ "required" for cargo transport and ~~"parts," "components," "accessories and attachments" that are "specially designed" therefor~~

d.1 Diesel engines ... ~~"specially designed"~~ for submarines

d.2 Electric motors ~~"specially designed"~~ for submarines and ...

Note: Other propulsion systems not specified in ECCN 8A620.d or elsewhere on the CCL (see Related Controls paragraph for this ECCN) and ~~"specially designed" for an article controlled by~~ described in USML Category XX are controlled by USML XX(b) or (c).

f ... ~~specially designed~~ "required"for military use ... ~~and specially designed components for use in the conversion of open circuit appparatus to military use~~.

x Option I

~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" for a commodity enumerated in ECCN 8A620 or for a defense article enumerated in USML Category XX and not elsewhere specified on the USML or the CCL

Option II
~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" for a commodity enumerated in ECCN 8A620 or for a defense article enumerated in USML Category XX except (b-3,4,5 carve-outs) and not elsewhere specified on the USML or the CCL
Option III
~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" "required" for a commodity enumerated in ECCN 8A620 or for a defense article enumerated in USML Category XX and not elsewhere specified on the USML or the CCL and all "parts," "components," "accessories," or "attachments" for a commodity enumerated in ECCN 8A620 or for a defense article enumerated in USML Category XX accompanied by technology to assemble them into such a commodity or such an article
Note 2: ~~"Parts,"~~ "components," "accessories and attachnments" specified in ECCN 8A620.y are subject to the controls of that paragraph.

y Specific ~~"parts,"~~ "components," "accessories," and "attachments" ~~"specially designed"~~ for a commodity subject to control in this ECCN or for a defense article in USML Category XX and not elsewhere specified on the USML or the CCL, as follows:

8A992

Vessels ... not controlled by ... ~~8A918~~, as follows, and ~~specially designed parts~~ components "required" therefor

a.1 Television systems ... ~~having~~ rated for a limiting resolution ... and ~~specially designed or modified~~ for remote operation with a submersible vehicle; or

a.2 Underwater television cameras ~~having~~ rated for a limiting resolution ...

b Photographic still cameras ~~specially designed or modified~~ rated for underwater use, ~~having~~ for a film ~~formate~~ format of 35 mm or larger, and ~~having~~ for auto-focusing or remote focusing ~~specially designed~~ 'required"for underwater use;

c Stroboscopic light systems, ~~specially designed or modified~~ rated for underwater use~~,~~ ~~capable of~~ and for a light output energy of more than 300 J per flash

f Vessels, n.e.s., including inflatable boats , ~~and specially designed components therefor, n.e.s.~~;

(Components are covered by item heading.)

g Marine engines ... and submarine engines, n.e.s., ~~and specially designed parts therefor, n.e.s.~~;

(Components are covered by item heading.)

h ~~Other~~ self-contained underwater breathing apparatus (scuba gear) and ~~related~~ equipment "required" therefor, n.e.s.;

k Air compressors and filtration systems ~~specially designed~~ rated for filling air cylinders

8B001

Water tunnels ~~having~~ rated for a background noise ... and ~~designed~~ for measuring acoustic fields ...

8B609

Test, inspection, and production "equipment" ~~and related commodities~~ ~~"specially designed"~~ for ~~the "development" or "production" of commodities enumerated in ECCN 8A609 or USML Category VI~~ surface vessels of war, as follows (see List of Items Controlled), and components "required" therefor

a. Test, inspection, and production "equipment" ~~"specially designed"~~ "required" for the "development" or "production" of commodities enumerated in ECCN 8A609 (except for 8A609.y) or in USML Category VI~~, and "parts," "components," "accessories and attachments" "specially designed" therefor~~

y Specific test, inspection, and production "equipment" ~~"specially designed"~~ "required" for the "development" or "production" of commodities enumerated in ECCN 8A609 (except for 8A609.y) or USML Category VI~~, and "parts," "components," "accessories and attachments" "specially designed" therefor~~, as follows:

8B620

Test, inspection, and production "equipment" ~~and related commodities~~ ~~"specially designed"~~ for ~~the "development" or "production" of commodities enumerated in ECCN 8A620~~ submersible vessels, oceanographic and associated "equipment, as follows , and components "required" therefor

a. Test, inspection, and production "equipment" ~~"specially designed"~~ "required" for the "development" or "production" of commodities enumerated in ECCN 8A620 (except for 8A620.b and .y) or in USML Category XX~~, and "parts," "components," "accessories and attachments" "specially designed" therefor~~

b. Test, inspection, and production "equipment" ~~"specially designed"~~ "required" for the "development" or "production" of commodities enumerated in ECCN 8A620.b~~, and "parts," "components," "accessories and attachments" "specially designed" therefor~~

y Specific test, inspection, and production "equipment" ~~"specially designed"~~ "required" for the "development" or "production" of commodities enumerated in ECCN 8A620 (except for 8A620.b and .y) or USML Category XX~~, and "parts," "components," "accessories and attachments" "specially designed" therefor~~, as follows:

8C001

'Syntactic foam' ~~designed~~ rated for underwater use and ~~having~~ for all of the following ...

a ~~Designed for~~ marine depths exceeding 1,000 m ...

(Rated in heading substitutes for designed in .a.)

8C609

Materials ~~"specially designed"~~ for ~~the "development" or "production" of commodities controlled by 8A609~~ vessels of war not elsewhere specified in the CCL or in the USML, as follows (see List of Items Controlled)

Related Controls (1) ~~See USML Categories VI and XIII(f) for controls on materials "specially designed" for vessels of war enumerated in USML Category VI.~~...

(The December 23, 2011, proposed Category VI covers no material. The only material covered in the May 18, 2012, proposed Category XIII(f) is classified. Regulations on

classification are more effective than export controls to restrict classified materials.)

a Materials ~~"specially designed"~~ "required" for commodities enumerated in ECCN 8A609 (except for 8A609.y) or USML Category VI not elsewhere ~~specified~~ controlled in the USML or the CCL

y Specific materials ~~"specially designed"~~ "required" for ~~the "development" or "production" of~~ commodities enumerated in ECCN 8A609 (except for 8A609.y) or USML Category VI~~, and "parts", "components", "accessories and attachments" "specially designed" therefor,~~ as follows:

8D001

"Software" ~~specially designed or modified~~ "required" for ...
TSR: Yes, except ... "software" ~~specially designed~~ "required" for ...
STA: ... "software" ~~specially designed~~ "required" for ...

8D002

~~Specific~~ "software" ~~specially designed or modified~~ "required" for the "development", "production", repair, overhaul or refurbishing (re-machining) of propellers ~~specially designed~~ rated for underwater noise reduction

8D609

Software ~~"specially designed"~~ for the ~~"development," "production," operation, or maintenance of~~ surface vessels of war and related commodities or software ~~controlled by 8A609, equipment controlled by 8B609, or materials controlled by 8C609~~, as follows (see List of Items Controlled).
Related Controls: (1) Software ~~directly related to~~ "required" for the installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Category VI is controlled under USML Category VI(g).

a "Software" ~~"specially designed"~~ "required" for the "development," "production," installation, operation, ~~or~~ maintenance, repair, overhaul, or refurbishing of ~~commodities controlled by~~ 8A609 , 8B609, or ~~8C609~~ 8D609 (excerpt for 8A609.y, 8B609.y, ~~or~~ 8C609.y , or 8D609.y)

b ~~[Reserved]~~ Software "required" for the "development" or "production" of USML Category VI.a,b,c,e,f and the software portion of VI.g.

c ~~[Reserved]~~ "Software," not controlled by the USML or 8D609.a or .b "required" for "equipment" not controlled by the USML or 8A609 to perform the functions specified in USML Category VI

y Specific software ~~"specially designed"~~ "required" for the "development," "production," operation, ~~or~~ maintenance of ~~commodities enumerated in~~ 8A609.y, 8B609.y, or ~~8C609.y~~ 8D609.y, as follows

8D620

Software ~~"specially designed"~~ for ~~the "development," "production," operation, or maintenance of~~ submersible vessels of war, oceanographic and associated equipment ~~controlled by 8A620 or equipment controlled by 8B620~~ or software, as follows (see List of Items Controlled)

Related Controls: (1) Software ~~directly related to~~ "required" for the installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Category XX is controlled under USML Category XX(d).

a "Software" ~~"specially designed"~~ "required" for the "development," "production," installation, operation, ~~or~~ maintenance of commodities controlled by 8A620 ~~or~~ , 8B620, or 8D620 (excerpt for 8A620.b and .y ~~or~~, 8B620.b and .y and 8D620.b and y)

b "Software" ~~"specially designed"~~ "required" for the "development," "production," installation, operation, ~~or~~ maintenance, repair, overhaul, or refurbishing of ~~commodities controlled by~~ 8A620.b ~~or~~ , 8B620.b, or 8D620.b

c ~~[Reserved]~~ Software "required" for the "development" or "production" of USML Category XX.a,b,c and the software portion of XX.d.

d ~~[Reserved]~~ "Software," not controlled by the USML or 8D620.a, .b, or .c "required" for "equipment" not controlled by the USML or 8A620 to perform the functions specified in USML Category XX

y Specific software ~~"specially designed"~~ "required" for the "development," "production," operation, ~~or~~ maintenance of ~~commodities enumerated in~~ 8A620.y ~~or~~ , 8B620.y, or 8D609.y, as follows

8D992

"Software" ~~specially designed or modified~~ "required" for ...

8E002

a "Technology" "required" for the "development", "production", repair, overhaul or refurbishing (re-machining) of propellers ~~specially designed~~ rated for underwater noise reduction;

b "Technology" "required" for

8E609

"Technology" ~~"required"~~ for ~~the "development," "production," operation, installation, maintenance, repair, or overhaul of~~ surface vessels of war ~~and related commodities controlled by 8A609, equipment controlled by 8B609, materials controlled by 8C609, or software controlled by 8D609~~ as follows (see List of Items Controlled)

Related Controls: (1) ~~Technical data~~ "Technology" ~~directly related to~~ "required" for the installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Category VI are controlled under USML Category VI(g)

a "Technology" "required" for the "development," "production," installation, operation, ~~installation,~~ maintenance, repair, ~~or~~ overhaul or refurbishment of ~~commodities controlled by~~ 8A609, 8B609, or 8C609, ~~or "software" controlled by~~ 8D609, except for ~~ECCN~~ 8A609.y, 8B609.y, 8C609.y, or 8D609.y

b ~~[Reserved]~~ "Technology" "required" for the "development" or "production" of USML Category VI.a,b,c,d,e,f and the software portion of VI.g

c ~~[Reserved]~~ "Technology" "required" for the design of, the assembly of components into, and the operation, maintenance and repair of, complete production installations forUSML Category VI, even if the components of such production installations are not controlled.

d ~~[Reserved]~~ "Technology" "required" for the assembly of components into end-items controlled by USML Category VI or ECCNs 8A609, 8B609, 8C609, or 8D609, even if the components of such end-items are not controlled.

y "Technology" "required" for the "development," "production," installation, operation, ~~installation,~~ maintenance, repair, ~~or~~ overhaul or refurbishing of ~~commodities controlled by ECCN~~ 8A609.y, 8B609.y, or 8C609.y, ~~or "software" controlled by~~ 8D609.y, as follows:

8E620

"Technology" ~~"required"~~ for ~~the "development," "production," operation, installation, maintenance, repair, or overhaul of~~ submersible vessels, oceanographic and associated equipment ~~controlled by 8A620, equipment controlled by 8B620, or software controlled by 8D609~~ as follows (see List of Items Controlled)

Related Controls: (1) ~~Technical data~~ "Technology" ~~directly related to~~ "required" for the installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Category XX are controlled under USML Category XX(d)

a "Technology" "required" for the "development," "production," installation, operation, ~~installation,~~ maintenance, repair, overhaul, or refurbishment of ~~commodities controlled by~~ 8A620 ~~or~~,8B620, or ~~"software" controlled by~~ 8D609, except for ~~ECCN~~ 8A620.b and ,y, 8B620.b and .y, or 8D620b and ..y

b "Technology" "required" for the "development," "production," installation, operation, ~~installation,~~ maintenance, repair, overhaul, or refurbishment of ~~commodities controlled by~~ 8A620.b ~~or~~,8B620.b, or ~~"software" controlled by~~ 8D620.b

c ~~[Reserved]~~ "Technology" "required" for the "development" or "production" of USML Category XX.a,b,c, and the software portion of XX.d

d ~~[Reserved]~~ "Technology" "required" for the design of, the assembly of components into, and the operation, maintenance and repair of, complete production installations forUSML Category XX, even if the components of such production installations are not controlled.

e ~~[Reserved]~~ "Technology" "required" for the assembly of components into end-items controlled by USML Category XX or ECCNs 8A620, 8B620, or 8D620, even if the components of such end-items are not controlled.

y "Technology" ~~"specially designed"~~ "required" for the "development," "production," installation, operation, ~~installation,~~ maintenance, repair, overhaul, or refurbishment of ~~commodities controlled by ECCN~~ 8A620.y ~~or~~ , 8B620.y, or ~~"software" controlled by~~ 8D620.y, as follows:

8E992

"Technology" "required" for ...

Recapitulation

A. Specially designed

1. Limit controlled item to its controlled parameters (excluding components)

Change specially designed to "required" 8A002.l, m, o.1, o.3.a, o.3.b, 8A609.a, 8A620.a, 8A992.b, 8B609.a,y, 8B620.a,b,y, 8C609.a,y, 8D001 TSR, STA, 8D609.a,y, 8D620.a,b,y

Change specially designed to rated 8A002.g.2, h. 8A992.k, 8D002, 8E002.a

Delete specially designed 8A002.e.3, j.1.a, j.1.b, j.1.c, j.1.d.1, j.1.d.2, j.1.d.3, j.2.a, j.2.b, j.2.c, j.2.d, j.3.a, j.3.b.1, j.3.b.2, j.3.b.3, j.4.a, j.4.b, k.1, k.2, 8B609, 8B620, 8C609, 8C609 Related Controls (1), 8D609, 8D620

2. Limit controlled components referred to as components

Change specially designed to required 8A609.x Option III, 8A620.d Note, 8A520.f, x Option III

Delete specially designed 8A992.f, g, 8A609.x Options I, II, y, 8A620.b, d.1, d.2, d Note, f, x Options I, II, y, 8B609.a, 8B620,a, 8C609.y

3. Limit controlled contained items not using the word components

Change specially designed parts to "required" components 8A992

B Specially designed or modified

1. Limit controlled item to its controlled parameters (excluding components)

Change specially designed or modified to "required" 8A002.a,n,r, 8D001, 8D002, 8D992

Change specially designed or modified to rated 8A002.d.1.a, d.1.c, d.2, e, I, 8A992.a.1, b,c

Delete specially designed or modified 8A002 Related Controls (3),(4)

D Designed or modified

1. Limit controlled item to its controlled parameters (excluding components)

Change designed or modified to "required" 8A002.b

E. Usable in or capable of

1. Limit controlled item to its controlled parameters (excluding components)

Change capable of to rated for 8A002.g, g.1, o.1.e

Delete capable of 8A001.e.1

Delete enabling 8A002.b.1

Delete usable 8A002.e.3

Delete ability 8A002.h.2

Delete using 8A002.h.2, i.2, i.2 Technical Note (2x), p.2

F. **Designed**

1. Limit controlled item to its controlled parameters (excluding components)

Change designed to rated 8A001.a, c, g, h, i Technical Note, 8A002.a, o.2, o.3,

8B001, 8C001
Delete designed 8A001.b.1, b.2, b.3.a, c.1, d.1, 8A002.k.1, k.2, 8C001.a
Delete design 8A001f.1, i.1, i.2

G Miscellaneous expressions

1. Limit controlled item to its controlled parameters (excluding components)

Change directly related to required 8D609 Related Controls, 8D620 Related Controls, 8E609 Related Controls, 8E620 Related Controls
Change having to rated for 8A001.b, d, f, I, 8A002.b, d.1.a, d.1.b, d.1.c, e, h, j.1, j.2, j.4, k, p, 8A992.a.1, a.2, 8B001, 8C001
Change with and having to rated 8A001.e
Change with to rated for 8A002.j.3, o.2.b, o.2.c
Change employing to rated 8A002.o.1.c
Change having to with 8A002.j.1.d
- Change specified to controlled 8A002 Related Controls (3), (4), 8A002.a.4
Delete directly related 8A609 Related Controls, 8A620 Related Controls
Delete having 8A001,b,1, b,3**,** 8A002i.2, j.3.b
Delete special 8A002.j.1.c, j.2.c, j.4.a, 8A609 Related Controls, 8A620 Related Controls
Delete operating 8A002.h.1
Delete can 8A002.b Technical Note
Delete dedicated 8A002.h, i.2, i.2 Technical Note
Delete required 8E609, 8E620

3. Limit controlled contained items not using the word components

Change related to “required” (equipment for devices) 8A992.h
Change parts to components 8A992
Delete parts 8A609 Unit, 8A609.x, y, 8A609.x Note 2 (2x), 8A620 Unit, 8A620.x,y, 8A620.x Note 2 (2x)
Delete accessories and attachments 8A609.x Note 2, 8A620.x Note 2

H **Replace absence of any expression**

1. Limit controlled item to its controlled parameters (excluding components)

Add “required” 8E002.a, b, 8E992, 8D609.b,c, 8D620.c,d, 8E609.b,c,d, 8E620.c,d,e

July 16, 2012

Specially Designed Issues CCL Category 9

A.
N.B. For propulsion systems ~~designed or~~ rated against ...
9A001
a Note: 9A001 does not control ...
b ~~Intended to power~~ Powering non-military unmanned aircraft ...
b ~~Designed~~ Rated to power an aircraft ~~designed~~ rated to cruise at Mach 1 or higher, for more than 30 minutes.

9A002
'Marine gas turbine engines' ... and ~~specially designed assemblies and~~ components "required" therefor.
(Assemblies are a subset of components.)
9A003
~~Specially designed assemblies and~~ components incorporating any of the technologies...
(Technical description of components permits deletion of specially designed.)
b Whose ~~design~~ development or production origins are ...

9A004
Related Controls: ...(4) All other "spacecraft" not controlled under 9A004 and their payloads, and ~~specifically designed or modified~~ components~~, parts, accessories, attachments and associated equipment~~, including ground support equipment, as defined in the USML are subject to the export licensing authority of the Department of State unless otherwise transferred to the Department of Commerce ... (5) ... All ~~specially designed or modified~~ components~~, parts,~~ accessories, and attachments,~~ and associated equipment~~ "required" for "spacecraft" that have been determined by the Department of State through the commodity jurisdiction process to be under the licensing jurisdiction of the Department of Commerce and that are not controlled by any other ECCN on the Commerce Control List will be assigned a classification under this ECCN 9A004. (6) ~~Technical data required~~ "Technology" as defined in the USML for the ~~detailed design,~~ development~~, manufacturing,~~ or production of the international space station (to include ~~specifically designed parts and~~ components) remains under the jurisdiction of the Department of State. This control by the ITAR of ~~detailed design,~~ development~~, manufacturing~~ or production technology for NASA's international space station does not include that level of ~~technical data~~ "technology" necessary and reasonable for assurance that a U.S.-built item ~~intended~~ to operate on NASA's international space station has been ~~designed, manufactured and~~ tested in conformance with specified requirements ... . All ~~technical data~~ "technology" and all defense services, including all technical assistance, for launch of the international space station ... are controlled and subject to the jurisdiction of the Department of State ...
a ... Hardware ~~specific to~~ "required" for the international space station ...

9A006

Systems and components ~~specially designed~~ for liquid rocket propulsion systems.

9A008

Components ~~specially designed~~ for solid rocket propulsion systems.

9A010

~~Specially designed~~ components, systems and structures for launch vehicles, launch vehicle propulsion systems or "spacecraft" ...

9A011

... and ~~specially designed~~ components therefor.

9A012

Non-military "unmanned aerial vehicles," ("UAVs"), unmanned "airships", ~~associated~~ and systems, equipment and components therefor, as follows

MT applies to ... ~~capable of~~ rated for ...

Unit ..Equipment in number; ~~parts and accessories~~ components in $ value

a.1 ~~An~~ Rated for autonomous flight control and navigation ~~capability~~ ...

a.2 ~~Capability of~~ Rated for controlled flight ...

b ~~Associated~~ systems, equipment and components ...

b.1 Equipment ~~specially designed~~ "required" for remotely controlling ...

b.2 Systems for navigation, attitude, guidance or control, ... ~~and specially designed to provide~~ "required" for providing autonomous flight control or navigation ~~capability~~ to "UAVs" controlled by 9A012.a

b.3 ... ~~specially designed to convert~~ "required" for converting ...

b.4 ... ~~specially designed or modified to propel~~ "required" for propelling .

9A101

Related Controls: 9A101.b controls only engines for non-military ... UAVs or ... RPVs and does not control other engines ~~designed or modified~~ as defined in the USML for use in "missiles" .....

b Engines ~~designed or modified~~ as defmed in the USML for ~~use in~~ "missiles", regardless of thrust or specific fuel consumption.

9A103

Liquid propellant tanks ~~specially designed~~ as defined in the USML for the propellants... or other liquid propellants ~~used in~~ for "missiles."

9A104

Sounding rockets, ~~capable of~~ rated for a range of at least 300 km

9A106

Systems or components ..., ~~usable in~~ as defined in the USML for "missiles" ...

Unit: Equipment and components in number~~; parts and accessories in $ value~~..

d Liquid and slurry propellant (including oxidizers) control systems, and ~~specially designed~~ components "required" therefor, ~~designed or modified~~ rated to operate in vibration

environments greater than 10g rms between 20 Hz and 2000 Hz
Note: The only servo valves and pumps controlled by 9A106.d are the following:
a. Servo valves ~~designed~~ rated for ...
b Pumps, for liquid propellants, ~~with~~ rated for shaft speeds ...
c Flight control servo valves ~~designed or modified for use in~~ "required" for "missiles" and ~~designed or modified~~ rated to operate in a vibration environment greater than 10g rms over the entire range between 20 Hz and 2kHz

9A107
Solid propellant rocket engines, ~~usable in~~ for rockets ~~with a range capability~~ rated for a "range" of 300 km or greater...

9A108
Solid rocket propellant components ... ~~usable in~~, as defined in the USML, for rockets ~~with a range capability~~ rated for a "range" of 300 km or greater

9A109
Hybrid rocket motors and components therefor, ~~usable in~~, as defined in the USML for rockets ~~with a range capability~~ rated for a "range" of 300 km or greater ... ~~and specially designed components therefor~~.

9A110
Composite structures, laminates and manufactures thereof... ~~specially designed~~ "required" for ~~use in~~ "missiles" or ...
Related Controls: ... (2) "composite" structures, laminates, and manufactures thereof, ~~specially designed~~ as defined in the USML for use in missile systems are under the licensing authority of the Directorate of Defense Trade Controls, U.S. Department of State, except those ~~specially designed~~ "required" for non-military unmanned air vehicles controlled by 9A012.

9A111
Pulse jet engines and components therefor ~~usable in~~, as defined in the USML for rockets, missiles, or unmanned aerial vehicles ~~capable of achieving~~ rated for a "range" equal to or greater than 300 km~~, and specially designed components therefor~~.

9A115
Apparatus, devices, and vehicles ~~designed or modified~~ as defined in the USML for ... ~~capable of achieving~~ rated for a "range" equal to or greater than 300 km.

9A116
Reentry vehicles and equipment therefor, ~~usable in~~ , as defined in the USML, for "missiles"~~, and equipment designed or modified therefor~~

9A117
Staging mechanisms, separation mechanisms, and interstages therefor,~~, usable in~~ as defined in

the USML for "missiles"..

9A118
Devices to regulate combustion of engines ~~usable in~~ as defined in the USML for engines ~~which are usable in~~ for rockets ~~with~~ rated for a range ~~capability~~ ...

9A119
Individual rocket stages, ~~usable in~~ as defined in the USML for rockets ~~with~~ rated for a range capability

9A120
Complete unmanned aerial vehicles, not ~~specified in~~ controlled by 9A012 ...
Unit: Equipment in number~~; parts and accessories in $ value~~
Related Controls: ... and components therefor~~, specially designed or modified~~ for ...
a ~~Having~~ Rated for any of the following:
a,1 ~~An~~ autonomous flight control and navigation ~~capability~~; or
a.2 ~~Capability of~~ controlled flight out of the direct vision range ...
b. ~~Having~~ Rated for any of the following:...
b.2 ~~Designed or modified to incorporate~~ incorporating ...

9A610
Unit: ... ~~parts,~~ ...
Related Controls: Military aircraft and related articles that are enumerated in USML Category VIII.a-h, and ~~technical data (including software) directly related thereto~~ "technology" and "software" as defined in USML Category VIII.i, are subject to the ITAR ...

a "Military aircraft" ~~specially designed for a military use~~ that are not enumerated in USML paragraph VIII.a.
Note 1: For purpose of paragraph .a the term "military aircraft" ~~includes~~ means the following types of aircraft to the extent they ~~were "specially designed"~~ are for a military use and are not enumerated in USML paragraph VIII(a) ...

f Pressure refuelers, pressure refueling "equipment", "equipment" ~~"specially designed"~~ to facilitate operations in confined areas and ground equipment ~~"specially designed"~~ for aircraft controlled by either USML paragraph VIII(a) or ECCM 9A610.a.

g Military crash helmets and protective masks, pressurized breathing equipment and partial pressure suits for use in aircraft controlled by either USML paragraph VIII(a) or ECCN 9A610.a, anti-g suits, liquid oxygen converters ~~"specially designed"~~ for aircraft ...

h Canopies, harnesses, platforms, electronic release mechanisms ~~"specially designed"~~ for ~~use with~~ aircraft controlled by either USML paragraph VIII(a) or ECCN 9A610.a, parachutes and paragliders ~~"specially designed" or modified~~ for military use, and "equipment" "~~designed" or modified~~ for military high altitude parachutists, ~~such~~ as follows: suits, ~~special~~ helmets, breathing systems, and navigation equipment.

i Automatic piloting systems for parachuted loads; equipment ~~"specially designed"~~ for military use for controlled opening jumps at any height, including oxygen equipment.

j Ground effect machines (GEMS) including surface effect machines and air cushion vehicles, not controlled by 8A002.k,l,m, ~~"specially designed"~~ for use by a military.

k Military aircraft instrument flight trainers that are not ~~"specially designed"~~ to simulate combat. (See USML Cat. IX for controls on such trainers that are ~~"specially designed"~~ to simulate combat).

l. Apparatus and devices ~~designed or modified~~ for the handling of UAVs or drones controlled by either USML paragraph VIII(a) or ECCN 9A610.a, and ~~capable of~~ rated for a range equal to or greater than 300 km.

m Radar altimeters, not controlled by 7A006 or 7A106, ~~designed or modified~~ for ~~use in~~ UAVs or drones controlled by either USML paragraph VIII(a) or ECCN 9A610.a, and ~~capable of~~ rated for delivering at least 500 kilograms payload to a range of at least 300 km.

n ... flight control systems ... and attitude control equipment, not controlled by 7A003, 7A103, 7A116, or 7A117, ~~designed or modified~~ for UAVs or drones controlled by either USML paragraph VIII(a) or ECCN 9A610.a, and ~~capable of~~ rated for delivering at least 500 kilograms payload to a range of at least 300 km

x Option I

~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" for a commodity subject to control in paragraphs .a through .k of this ECCN or a defense article in USML Category VIII and not elsewhere specified on the USML or the CCL

Option II

~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" for a commodity subject to control in paragraphs .a through .k of this ECCN or a defense article in USML Category VIII except (b-3,4,5 carve-outs) and not elsewhere specified on the USML or the CCL

Option III

~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" "required" for a commodity subject to control in paragraphs .a through .k of this ECCN or a defense article in USML Category VIII and not elsewhere specified on the USML or the CCL and not elsewhere specified on the USML or the CCL and all "parts," "components," "accessories," or "attachments" for a commodity enumerated in ECCN 8A609 or for a defense article enumerated in USML Category VI accompanied by technology to assemble them into such a commodity or such an article

Note 2: ~~"Parts,"~~ "components," ~~"accessories and attachments"~~ specified in USML subcategory VIII(f) or VIII(h) are subject to the controls of that paragraph. ~~"Parts,"~~ "components," "accessories and attachments" specified in ECCN 9A610.y are subject to the controls of that paragraph.

y Specific ~~"parts,"~~ "components," "accessories," and "attachments" ~~"specially designed"~~ for a commodity subject to control in this ECCN or for a defense article in USML Category VIII and not elsewhere specified on the USML or the CCL, and other aircraft commodities ~~"specially designed"~~ for a military use, as follows:

9A619

Unit: ... ~~parts,~~ ...

Related Controls: Military gas turbine engines and related articles that are enumerated in USML Category XIX, and ~~technical data (including software) directly related thereto~~ "technology" and "software" as defined in USML Category XIX(g), are subject to the ITAR ...

a "Military gas turbine engines" ~~specially designed for a military use~~ that are not controlled in USML paragraph XIX, paragraphs (a), (b), or (d) or by ECCN 9A001 or 9A002
Note: For purpose of ECCN 9A619.a the term "military gas turbine engines" means gas turbine engines ~~"specially designed"~~ for "end-items" enumerated in USML Category VI, VII, or VIII or on the CCL under ...

b Digital engine controls, not controlled by 9A001 or 9A003, ... ~~"specially designed"~~ for gas turbine engines controlled in this ECCN 9A619.

c The following components for gas turbine engines controlled by 9A619.a, not controlled by 9A003

c.1 Hot Section components ~~(i.e.,~~ as follows: combustors, turbine blades, vanes, nozzles, disks and shrouds~~)~~; ~~and related~~

c.2 Cooled components ~~(i.e.,~~as follows: cooled low pressure turbine blades, vanes, disks; cooled augmenters; and cooled nozzles~~) "specially designed" for gas turbine engines controlled in this ECCN 9A619.~~; and

c.3 The cowl, diffuser, dome, chamber and liners for the combustors ~~are also controelled by this paragraph .c~~.

d Engine monitoring systems ... ~~"specially designed"~~ for gas turbine engines and components controlled in this ECCN 9A619.

x Option I
~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" for a commodity controlled by this ECCN (other than ECCN 9A619.c) or a defense article in USML Category XIX and not elsewhere specified on the USML or the CCL
Option II
~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" for a commodity controlled by this ECCN (other than ECCN 9A619.c) or a defense article in USML Category XIX except (b-3,4,5 carve-outs) and not elsewhere specified on the USML or the CCL
Option III
~~"Parts," "components," "accessories and attachments" that are "specially designed"~~ Any "component," "accessory," or "attachment" "required" for a commodity controlled by this ECCN (other than ECCN 9A619.c) or a defense article in USML Category XIX and not elsewhere specified on the USML or the CCL and all "parts," "components," "accessories," or "attachments" for a commodity enumerated in ECCN 9A619 or for a defense article enumerated in USML Category XIX accompanied by technology to assemble them into such a commodity or such an article
Note 2: ~~"Parts,"~~ "components," ~~"accessories and attachments"~~ specified in USML subcategory XIX(f) are subject to the controls of that paragraph. ~~"Parts,"~~ "components," "accessories and attachments" specified in ECCN 9A619.y are subject to the controls of

that paragraph.

y Specific ~~"parts,"~~ "components," "accessories," and "attachments" ~~"specially designed"~~ for a commodity subject to control in this ECCN 9A619 or for a defense article in USML Category XIX and not elsewhere specified on the USML or the CCL, and other ~~aircraft~~ gas turbine engine commodities for military use, as follows:

9A980

...~~; and parts and accessories, n.e.s.,~~ components "required" therefor

9A990

Diesel engines, n.e.s., and tractors and ~~specially designed parts~~ components "required" therefor, n.e.s.

b ... ~~and parts and accessories~~, n.e.s.

c ... ~~and specially designed parts~~.

9A991

... and ~~parts and~~ components, ~~n.e.s~~

Related Controls: ... Technology ~~specific to~~ as defined in the USML for the development and production of QRS11 sensors remains subject to the licensing jurisdiction of the Department of State.

a Military "aircraft", demilitarized (not ~~specifically equipped or modified for military operation~~ defined on the USML), as follows:...

c Aero gas turbine engines and ~~specially designed parts~~ components "required" therefor
Note: 9A991.c does not control aero gas turbine engines ~~that are destined for use in~~ rated for civil "aircraft" ...

d ~~Aircraft parts and components, n.e.s.~~ Components "required" for "aircraft."

e Pressurized aircraft breathing equipment~~, n.e.s.; and specially designed parts therefor, n.e.s.~~ and components "required" therefor.

9B001

Equipment, tooling and fixtures, ~~specially designed~~ "required" for ~~manufacturing~~ "development" or "production" of gas turbine blades, vanes, to tip shroud castings, as follows

Related Controls: (1) For ~~specially designed~~ production equipment ~~of~~ "required" for systems, subsystems and components controlled by ... ~~usable in "missiles"~~ see 9B115

(9B115 does not include the words usable in "missiles".)

9B002

MT applies ... described in ~~9A001~~ 9A101

a ~~Specially designed~~ for ...

9B003

Equipment ~~specially designed~~ "required" for the "production" or test of gas turbine brush seals ~~designed~~ rated to operate ... and ~~specially designed~~ components "required" ~~or accessories~~ therefor.

9B005
On-line (real time) control systems ...~~specially designed for use with~~ "required " for ...
a. Wind tunnels ~~designed~~ rated for speeds of Mach 1.2 or more;
Note: 9B005.a does not control wind tunnels ~~specially designed~~ rated for ...
c Wind tunnels or devices ... ~~capable of~~ rated for simulating ...

9B006
Acoustic vibration test equipment ~~capable of~~ rated for ... and ~~specially designed~~ quartz heaters "required" therefor

9B007
Equipment ~~specially designed~~ "required for" ...

9B008
Transducers ~~specially designed~~ "rated" to operate at ...

9B009
Tooling ~~specially designed~~ "required" for producing turbine engine powder metallurgy rotor components ~~capable of~~ operating at ...

9B010
Equipment ~~specially designed~~ "required" for the production of "UAVs" and of ~~associated~~ systems, equipment and components controlled by 9A012.
Unit: Equipment in number~~; parts and accessories in $ value~~
.
9B105
Wind tunnels rated for speeds of Mach 0.9 or more ~~usable~~ "required" for rockets, missiles, or unmanned aerial vehicles ~~capable of achieving~~ rated for a "range" equal to or greater than 300 km and ~~their~~ subsystems "required: therefor.

9B106
Environmental chambers ~~usable~~ "required" for rockets, missiles, or unmanned aerial vehicles ~~capable of achieving~~ rated for a "range" equal to or greater than 300 km and ~~their~~ subsystems."~~"~~"required" therefor" as follows
a Environmental chambers capable of simulating ..
a.2 Incorporating, ~~or designed or modified to incorporate,~~ ...
Technical Notes
1 ... ~~capable of~~ generating ... ~~capable of~~ generating ...
3 In 9B106.a.2, ~~designed or modified means~~ incorporating includes the environmental chamber ~~provides~~ having ~~appropriate~~ interfaces (e.g., sealing devices) to incorporate ... equipment ~~as specified in~~ controlled by this item

9B115
~~Specially designed~~ "production equipment"for ...

Definition of “production equipment” in 772.1
... machinery and components therefor, ~~limited to those specially designed or modified~~ “required” for “development” or ... “production”

9B116
~~Specially designed~~ “production facilities” for ...

Definition of “production facilities” in 772.1:
Means “production equipment” and ~~specially designed~~ “software” “required” therefor integrated into installations for “development” or ... “production”

9B117
Test benches and test stands “required” for solid or liquid propellant rockets, motors or rocket engines
a ~~The capacity to handle~~ Handling ...
b. ~~Capable of~~ simultaneously measuring ...

9B610
Test, inspection, and production ~~“equipment” and related commodities “specially designed”~~ for ~~the “development” or “production” of commodities enumerated in ECCN 9A610 or USML Category VIII~~ military aircraft, as follows (see List of Items Controlled)
a Test, inspection, and production “equipment” ~~“specially designed”~~ “required” for the “development” or “production” of commodities enumerated in ECCN 9A610 or USML Category VIII and ~~“parts”,~~ “components”, “accessories and attachments” ~~“specially designed”~~ “required” therefor
b Environmental test facilities ~~designed or modified~~ “required” for ... and ~~“parts”.~~ “components”, “accessories and attachments” ~~“specially designed”~~ “required” therefor
c “Production facilities” ~~“specially designed”~~ for UAVs or drones that are (i) controlled by either USML paragraph VIII(a) or ECCN 9A610.a and (ii) ~~capable of~~ rated for a range equal to or greater than 300 km.
y Specific test, inspection, and production “equipment” ~~“specially designed”~~ “required” for ... and ~~“parts”,~~ “components”, “accessories and attachments” ~~“specially designed”~~ “required” therefor ...

9B619
Test, inspection, and production ~~“equipment” and related commodities “specially designed”~~ for ~~the “development” or “production” of commodities enumerated in ECCN 9A619 or USML Category XIX~~ military gas turbine engines, as follows (see List of Items Controlled)
a Test, inspection, and production “equipment” ~~“specially designed”~~ “required” for the “development” or “production”, repair, overhaul, or refurbishment of commodities enumerated in ECCN 9A619 or USML Category XIX and ~~“parts”,~~ “components”, “accessories and attachments” ~~“specially designed”~~ “required” therefor
y Specific test, inspection, and production “equipment” ~~“specially designed”~~ “required” for

... and ~~"parts",~~ "components", "accessories and attachments" ~~"specially designed"~~ "required" therefor ...

9B990
Vibration and test equipment, and ~~specially designed parts and~~ components~~, n.e.s~~. "required" therefor

9B991
~~Specially designed~~ equipment, tooling or fixtures, ... "requjired" for manufacturing or measuring gas turbine blades, vanes, or tip shroud castings.

9C110
Resin impregnated fiber prepregs ~~and metal coated fiber preforms therefor,~~ "required" for composite structures, laminates and manufactures specified in controlled by 9A110 made either with ... , and metal coated fiber preforms "required" therefor.

9C610
Materials ~~"specially designed" for commodities controlled by 9A610~~ "military aircraft" not elsewhere specified in the CCL or the USML, as follows (see List of Items Controlled)
Related Controls: ~~USML subcategory XIII(f) controls structural materials specifically designed, developed, configured, modified, or adapted for defense articles, such as USML subcategory VIII(a) aircraft.~~ ...

(The only materials in the May 18, 2012, proposed XIII(f) are classified. Classification regulations would be more effective than export controls for classified materials.)

a Materials ~~"specially designed"~~ "required" for commodities controlled by 9A610 or USML Category VIII not elsewhere specified in the CCL or the USML
Note 2: Materials ~~"specially designed"~~ for an aircraft enumerated in USML Category VIII and for an aircraft enumerated in ECCN 9A610 are subject to the controls of this ECCN.

y Specific materials ~~"specially designed"~~ "required" for commodiies enumerated in ECCN 9A610 (except for 9A610.y) or USML Category VIII, as follows:

9C619
Materials ~~"specially designed" for commodities controlled by 9A619~~ "military gas turbine engines" not elsewhere specified in the CCL or the USML, as follows (see List of Items Controlled)
Related Controls: ~~See USML subcategory XIII(f) for controls on structural materials specifically designed, developed, configured, modified, or adapted for defense articles, such as USML subcategory XIX engines.~~ ...

(The only materials in the May 18, 2012, proposed XIII(f) are classified. Classification regulations would be more effective than export controls for classified materials.)

a Materials ~~"specially designed"~~ "required" for commodities controlled by 9A619 (except for 9A619.y) or USML Category XIX not elsewhere specified in the CCL or the USML
Note 2: Materials ~~"specially designed"~~ for an aircraft enumerated in USML Category

VIII and for an aircraft enumerated in ECCN 9A610 are subject to the controls of this ECCN.

y Specific materials ~~"specially designed"~~ "required" for commodiies enumerated in ECCN 9A619 (except for 9A619.y) or USML Category VIII, ~~and "parts", "components", "accessories and attachments" "specially designed" therefor~~, as follows:

9D001

"Software" ~~specially designed or modified~~ "required" for ...

STA: License Exception STA may not be used to ship or transmit "software" ~~specially designed or modified~~ controlled by 9D001 for the "development" of equipment or "technology" ~~specified~~ controlled by ...

Related Controls: ~~(1) "Software" "required" for the "development" of items controlled by 9A004 is subject to the export licensing authority of the U.S. Department of State ... (2) "Software" "required" for the "development" of equipment or "technology" subject to the export licensing authority of the U.S. Department of State, Directorate of Defense Trade Controls is also subject to the same licensing jurisdiction.~~...

(Such software is controlled by 9B116.)

9D002

"Software" ~~specially designed or modified~~ "required" for the "production" of ...

Related Controls: ~~(1) "Software" "required" for the "production" of items controlled by 9A004 is subject to the export licensing authority of the U.S. Department of State ... (2) "Software" "required" for the "production" of equipment or "technology" subject to the export licensing authority of the U.S. Department of State, Directorate of Defense Trade Controls is also subject to the same licensing jurisdiction~~. ...

(Such software is controlled by 9B116.)

9D003

Software" ~~specially designed or modified~~ "required" for the "use" of ... (FADEC) for

MT applies to "software" ~~required~~ for the "use" of FADEC for gas turbine engines controlled by ...

Related Controls:... (2) "Software" ~~"required"~~ as defined in the USML for the "use" of equipment or "technology" subject to the export licensing authority of the U.S. Department of State, Directorate of Defense Trade Controls is also subject to the same licensing jurisdiction....

9D004

b. ... ~~specially designed~~ "required" ... ~~capable of~~ rated for ...

c. ... ~~specially designed~~ "required" ...

e. ... ~~specially designed or modified~~ "required" ...

f. ... ~~specially designed~~ "required" to ~~design~~ develop ...

g.1. ... ~~specially designed~~ "required" ...

9D101

"Software" ~~specially designed or modified~~ "required" for ...

9D103
"Software" ~~specially designed~~ as defined in the USML for ...

9D104
"Software" ~~specially designed or modified~~ "required" for ...
Related Controls: "Software" as defined in the USML for commodities controlled by ... are subject to the export licensing authority of the U.S. Department of State ....

9D105
"Software" that coordinates the function of more than one subsystem ~~specially designed or modified~~ as defined in the USML for "use" in "missiles"

9D610
Software ~~"specially designed"~~ for ~~the "development," "production," operation, or maintenance of~~ military aircraft ~~and related commodities controlled by 9A610 or equipment controlled by 9B610, or materials controlled by 9C610~~ , as follows (see List of Items Controlled)
Related Controls: (1) Software ~~directly related to~~ "required" for the installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Category VIII is controlled under USML Category VIII(i).

a "Software" (other than software controlled in paragraph .y of this entry) ~~"specially designed"~~ "required" for the "development," "production," installation, operation, ~~or~~ maintenance, repair, overhaul, or refurbishing of commodities controlled by 9A610 (except 9A610.l,m,n or y), 9B610 (except 9B610.c or y), 9C610 (except 9C610.y) , or 9D610 (except 9D610.y)

b "Software"(other than software controlled in paragraph .y of this entry) ~~"specially designed"~~ "required" for the "development," "production," installation, operation, ~~or~~ maintenance, repair, overhaul, or refurbishing of ~~commodities controlled by~~ 9A610.l, m, or n, or 9B610.c

c ~~[Reserved]~~ Software "required" for the "development" or "production" of USML Category VIII.a,b,c,d,e,f,g,h and the software portion of VIII.i.

d ~~[Reserved]~~ "Software," not controlled by the USML or 9D610.a, .b, or .c "required" for "equipment" not controlled by the USML or 9A610 to perform the functions specified in USML Category VIII

y Specific software ~~"specially designed" for the "development," "production," operation, or maintenance of commodities enumerated in 9A610, 9B610, or 9C610~~, as follows

y.1 Specific software ~~"specially designed"~~ "required" for the "development," "production," operation, ~~or~~ maintenance of ~~commodities enumerated in~~ 9A610.y, 9B610.y, ~~or~~ 9C610 , or 9D610.y

9D619
Software ~~"specially designed"~~ for ~~the "development," "production," operation, or maintenance of~~ military gas turbine engines ~~and related commodities controlled by 9A619 or equipment controlled by 9B619, or materials controlled by 9C619~~, as follows (see List of Items Controlled)

Related Controls: (1) Software ~~directly related to~~ "required" for the installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Category XIX is controlled under USML Category XIX(g).

a "Software" (other than software controlled in paragraph .y of this entry) ~~"specially designed"~~ "required" for the "development," "production," installation, operation, ~~or~~ maintenance, repair, overhaul, or refurbishing of commodities controlled by 9A619 (except 9A619.y), 9B619 (except 9B619.y), 9C619 (except 9C610.y) , or 9D619 (except 9D610.y)

b ~~[Reserved]~~ Software "required" for the "development" or "production" of USML Category XIX.a,b,c,d,e,f and the software portion of XIX.g.

c ~~[Reserved]~~ "Software," not controlled by the USML or 9D619.a or .b "required" for "equipment" not controlled by the USML or 9A619 to perform the functions specified in USML Category XIX

y Specific software ~~"specially designed" for the "development," "production," operation, or maintenance of commodities enumerated in 9A619, 9B619, or 9C619~~, as follows

y.1 Specific software ~~"specially designed"~~ "required" for the "development," "production," operation, ~~or~~ maintenance of ~~commodities enumerated in~~ 9A619.y, 9B619.y, ~~or~~ 9C619 , or 9D619.y

9D990

"Software",.~~n.e.s.,~~ "required" for the "development" or "production" of 9A990 or 9B990.

9D991

"Software" "required" for the "development" or "production" of ...

9E001

Related Controls: ... (2) The "technology"~~required~~ as defined in the USML for the "development" of equipment controlled by 9A004, is subject to the export licensing authority of the U.S. Department of State ... (3) "Technology, ~~required~~ as defined in the USML for the "development" of equipment or "software" subject to the export licensing authority of the U.S. Department of State ... is also subject to the same licensing jurisdiction. ...

9E002

Related Controls: ... (3) The "technology" ~~required~~ as defined in the USML for the "production" of equipment controlled by 9A004, is subject to the export licensing authority of the U.S. Department of State ... (4) "Technology, ~~required~~ as defined in the USML for the "production" of equipment or "software" subject to the export licensing authority of the U.S. Department of State, ... is also subject to the same licensing jurisdiction. ...

9E003

Related Controls:(1) Hot section "technology" ~~specifically designed, modified, or equipped for military uses or purposes, or developed principally with U.S. Department of Defense funding,~~ as defined in the USML is subject to the licensing authority of the U.S. Department of State. ...

a.2.a Thermally decoupled liners ~~designed to operate~~ operating at 'combustor exit temperature'

exceeding ...

a.2.d Liners ~~designed to operate~~ operating at ‘combustor exit temperature’ exceeding ...

a.3.a ... ~~designed to operate~~ operating ...

a.4 ... ~~designed to operate~~ operating ...

b.1 ... ~~capable of~~ transmitting ...

e. “Technology” “required” for ...

f.1 ~~“Technology” “required” for the production of~~ engine systems having ...

f.2 ~~“Technology” “required” for the production of~~ turbocharger systems with ...

f.3 ~~“Technology” “required” for the production of~~ fuel injector systems ~~with a specially designed multifuel~~ for more than one type of fuel (e.g. diesel or jet ~~fuel~~) ~~capability~~ ...

f.3.b Electronic control features ~~specially designed~~ for switching governor characteristics ...

g Technical Note: ‘High output diesel engines’ ~~are diesel engines with a specified~~ have a rated brake mean effective pressure of ...

h Note: 9E003.h does not apply to technical data ~~related to~~ rated for engine-aircraft integration ~~required by~~ which the civil aviation certification authorities require to be published ... or rated for interface functions ...

i “Technology” “required” for adjustable flow path systems ~~designed~~ to maintain engine stability ...

i.2 ... for components ~~unique to the adjustable flow path system and that maintain~~ that adjusts flow path and maintains engine stability

i.3 “Development” “technology for the control law algorithms, including “source code”, ~~unique to the adjustable flow path system and that maintain~~ that adjusts flow path and maintains engine stability

j “Technology” not otherwise controlled in 9E003.a.1, through a.8. a.10, ~~and~~ or .h ~~and used in~~ “required” for the “development”, “production”, or overhaul of hot section ~~parts and~~ components of civil derivatives of military engines controlled on the U.S. Munitions List.

9E101

Related Controls: “Technology” ... ~~specially designed~~ as defined in the USML for ~~use in~~ missile systems and subsystems ... are subject to the export licensing authority of the U.S. Department of State ...

9E102

Related Controls: ... (2) “Technology” ... ~~specially designed~~ as defined in the USML for ~~use in~~ missile systems ... are subject to the export licensing authority of the U. S. Department of State ...

9E610

“Technology” ~~“required”~~ for ~~the “development”, “production”, operation , installation, maintenance, repair, overhaul or refurbishing of~~ military aircraft ~~and related commodities controlled by 9A610, equipment controlled by 9B610, materials controlled by 9C610, or “software” controlled by 9D610~~, as follows (see List of Items Controlled)

Note to License Exceptions Section: ... ~~“parts” and~~ ...

Related Controls: ~~Technical data directly related to~~ “Technology” “required” for the installation,

operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Category VIII are subject to the control of USML paragraph VIII(i)

a "Technology" (other than technology controlled by paragraph .y of this entry) "required" for the "development", "production", operation , installation, maintenance, repair, overhaul or refurbishing of commodities or software controlled by 9A610, 9B610, 9C610, or 9D610

b ~~[Reserved]~~ "Technology" "required" for the "development" or "production" of USML Category VIII.a,b,c,d,e,f ,g,h and the software portion of VIII.i

c ~~[Reserved]~~ "Technology" "required" for the design of, the assembly of components into, and the operation, maintenance and repair of, complete production installations forUSML Category VIII, even if the components of such production installations are not controlled.

d ~~[Reserved]~~ "Technology" "required" for the assembly of components into end-items controlled by USML Category VIII or ECCNs 9A610, 9B610, 9C610, or 9D610, even if the components of such end-items are not controlled.

y Specific "technology" ~~"required" for the "development," "production," operation, installation, maintenance, repair, or overhaul of commodities enumerated in ECCN 9A610.y, 9B610.y, 9C610,y, or 9D610.y~~, as follows:

y.1 "Technology" "required" for the "development," "production," installation, operation, ~~installation,~~ maintenance, repair, ~~or~~ overhaul, or refurbishing of ~~commodities enumerated in ECCN~~ 9A610.y, 9B610.y, 9C610,y, or 9D610.y

9E619

"Technolgoy" ~~"required"~~ for ~~the "development", "production", operation , installation, maintenance, repair, overhaul or refurbishing of~~ military gas turbine engines ~~and related commodities controlled by 9A619, equipment controlled by 9B619, materials controlled by 9C619, or "software" controlled by 9D619~~, as follows (see List of Items Controlled)

Note to License Exceptions Section: ... ~~"parts" and~~ ...

Related Controls: ~~Technical data directly related to~~ "Technology" "required" for the installation, operation, maintenance, repair, overhaul, or refurbishing of articles enumerated in USML Category XIX are subject to the control of USML paragraph XIX(g)

a "Technology" "required" for the "development", "production", installation, operation , ~~installation,~~ maintenance, repair, overhaul or refurbishing of commodities or software controlled by ECCN 9A619 (except 9A619,y), ECCN 9B619 (except 9B619,y), ECCN 9C619 (except 9C619,y), or ECCN 9D619 (except 9D619,y)

b ~~[Reserved]~~ "Technology" "required" for the "development" or "production" of USML Category XIX.a,b,c,d,e,f and the software portion of XIX.g

c ~~[Reserved]~~ "Technology" "required" for the design of, the assembly of components into, and the operation, maintenance and repair of, complete production installations for USML Category XIX, even if the components of such production installations are not controlled.

d ~~[Reserved]~~ "Technology" "required" for the assembly of components into end-items controlled by USML Category XIX or ECCNs 9A619, 9B619, 9C619, or 9D619, even if the components of such end-items are not controlled.

y Specific "technology" ~~"required" for the "development," "production," operation,~~

~~installation, maintenance, repair, or overhaul of commodities enumerated in ECCN 9A619.y, 9B619.y, 9C619,y, or 9D619.y~~, as follows:

y.1 "Technology" "required" for the "development," "production," installation, operation, ~~installation,~~ maintenance, repair, ~~or~~ overhaul or refurbishing of ~~commodities enumerated in ECCN~~ 9A619.y, 9B619.y, 9C619,y, or 9D619.y

9E990

"Technology", ~~n.e.s.~~ "required" for the "development", "production", or "use" of equipment controlled by 9A990 or 9B990

9E991

"Technology", ~~n.e.s.~~ "required" for the "development", "production", or "use" of equipment controlled by 9A991 or 9B991

9E993

Other "required" "technology"...

Recapitulation

A. Specially designed

1. Limit controlled item to its controlled parameters (excluding components)
   - Change specially designed to "required" 9A012.b,1, b,2, b,3, 9A610.x Option III, 9A619.x Option III, 9B001, 9B001 Related Controls, 9B003, 9B005, 9B007, 9B009, 9B010, 9B116 production facilities definition, 9B610.a,y, 9B619.a,y, 9B991, 9C610.a,y, 9C619.a,y, 9D004.b,c,f,g.1, 9D610.a,b,y.1, 9D619.a,y.1
   - Change specially designed to rated 9B008
   - Change specially designed to as defined in the USML 9A103, 9D103
   - Delete specially designed 9A610.a, a Note, f,g,h,i,j,k(2x), x Options I,II, y (2x), 9A619.a, a Note, b,c,d, x Options I.II, y, 9B610 hdg, c, 9B619, 9B002.a, 9B115, 9B116, 9C610, 9C619, 9D610, 9D619, 9E003.f.3, 9E003.f.3.b
2. <u>Limit controlled components referred to as components</u>
   - Change specially designed to "required"9A002, 9A106.d, 9A990, 9A991.c, 9B003, 9B610.a,b,y, 9B619.a,y, 9B990
   - Delete specially designed 9A003, 9A006, 9A008, 9A010, 9A011, 9A109, 9A111, 9A610.f , 9A990
3. <u>Limit controlled contained items not using the word components</u>
   - Change specially designed to "required" (assemblies for engines) 9A002
   - Change specially designed to "required" (systems for propulsion systems) 9A006
   - Change specially designed to "required" (systems and structures for launch vehicles, launch vehicle propulsion systems, and "spacecraft") 9A110
   - Change specially designed for use in to "required" for (structures and laminates for missiles) 9A110
   - Change specially designed to "required" (structures and laminates for missiles) 9A110 Related Controls
   - Change specially designed to "required" (quartz heaters for acoustic vibration test equipment) 9B006
   - Delete specially designed 9A003 (assemblies for engeines), 9A610.f (equipment)
   - Change specially designed to as defined in the USML 9A110 Related Controls, 9E101 Related Controls, 9E102 Related Controls
4. <u>Limit what is excepted from control</u>
   - Change specially designed to rated 9B005.a Note

B Specially designed or modified

1. <u>Limit controlled item to its controlled parameters (excluding components)</u>
   - Change specially designed or modified to "required" 9A012.b.4, 9B115 production equipment definition, 9D001, 9D002, 9D003, 9D004.e, 9D101, 9D104
   - Change specially designed or modified to as defined on the USML 9A004 Related Controls (4), 9D105
   - Delete specially designed or modified 9A610.h 9D001 STA

2. Limit controlled components referred to as components
   Change specially designed or modified to "required" 9A004 Related Controls (5)
3. Limit controlled contained items not using the word components
   Delete specially designed or modified (controls for spraying systems) 9A120

D Designed or modified

1. Limit controlled item to its controlled parameters (excluding components)
   Change designed or modified to required 9B610.b
   Change designed or modified to rated 9A106.d
   Change designed or modified to as defined in the USML 9A101 Related Controls, 9A115
   Delete designed or modified 9A120.b.2, 9A610.h,l.m,n
3. Limit controlled contained items not using the word components
   Change designed or modified to "required" (valves for missiles) 9A106.e
   Delete designed or modified (equipment for reentry vehicles) 9A116
   Change designed or modified to rated (valves for missiles) 9A106.e
   Delete designed or modified (shaker unit) 9B106.a.2, 9B106.a.2 Technical Note 3

E. Usable in or capable of

1. Limit controlled item to its controlled parameters (excluding components)
   Change usable to "required" 9B105, 9B106
   Change used in to "required" 9E003,j
   Change usable to as defined in the USML 9A108, 9A109, 9A111, 9A116, 9A117, 9A118, 9A119
   Change capable of to rated for 9A012 MT applies, 9A104, 9A111, 9B005.c, 9B006, 9B610.c, 9D004.b
   Change capable of achieving to rated for 9A115, 9B105, 9B106
   Change capability to rated for 9A012.a.1, a.2, b.2, 9A107, 9A108, 9A109, 9A610.l,m
   Delete capable of 9B009, 9B106.a. 9B106.a.2 Technical Note 1 (2x), 9B117.b, 9E003.b.1, f.3
   Delete capability 9A120.a.1, a.2
   Delete capacity 9B117.a
   Delete usable 9A107, 9B001 Related Controls
   Delete used in 9A103
   Delete adjustable 9E003.i.2, i.3
2. Limit controlled components referred to as components
   Change usable in to "required" 9A106
3. Limit controlled contained items not using the word components
   Change usable in to as defined in the USML for (systems for missiles) 9A106
   Change usable in to as defined in the USML for (reentry vehicles for missiles) 9A116
   Change usable in to as defined in the USML for (staging mechanisms for missiles) 9A117

Change usable in to as defined in the USML for (devices to regulate combustion for engines) 9A118
Change usable to as defined in the USML for (engines for rockets) 9A118
Change usable to as defined in the USML (rocket stages for rockets) 9A119

F. Designed

1. Limit controlled item to its controlled parameters (excluding components)
   Change designed to rated 9A001 2x, 9B003, 9B005.a
   Change design to develop 9D004.f
   Delete designed A. N.B., 9A004 Related Controls (6), 9E003.a.2.a, a.2.d, a.2.a, a.4, i
   Delete design 9A004 Related Controls (6) (2x)
   Delete intended 9A004 Related Controls (6)
   Delete unique 9E003.i.2, i.3
2. Limit controlled components referred to as components
   Change design to development 9A003.b
3. Limit controlled contained items not using the word components
   Change design to development 9A003.b
   Change designed to rated (valves for propellant control systems) 9A106.d Note a

G Miscellaneous expressions

1. Limit controlled item to its controlled parameters (excluding components)
   Change specific to "required" 9A004.a
   Change required to "required" 9D004.a, d
   Change directly related to required 9D610 Related Controls, 9D619 Related Controls, 9E610 Related Controls, 9E619 Related Controls
   Change special to rated 770.2(h)(1)
   Change with to rated for 9A118, 9A119
   Change having to rated for 9A120.a, b
   Change specified to rated 9E003.g Technical Note
   Change specified to controlled 9A120, 9B106.a.2 Technical Note 3, 9D001 STA
   Change required to as defined on the USML 9A004 Related Controls (6), 9E001 Related Controls (2), (3), 9E002 Relatec Controls (3), (4)
   Change "required" to as defined in the USML 9D001 Related Controls (1), (2), 9D002 Related Controls(1), (2), 9D003 Related Controls
   Change specifically designed to as defined in the USML 9A004 Related Controls (6)
   Change specific to to as defined in the USML for 9A991 Related Controls
   Change specifically equipped or modified for military operation to as defined in the USML 9A991.a
   Change specifically designed, modified, or equipped for military uses or purposes, or developed principally with U.S. Department of Defense funding to as defined in the USML 9E003 Related Controls
   Change directly related to as defined in the USML 9A610 Related Controls,

9A619 Related Controls

Delete required 9D003 MT applies, 9D610.y, 9D619.y, 9E610 hdg, y. 9E619.hdg,y

Delete specifically designed, developed, configured, modified, or adapted 9C610 Related Controls, 9C619 Related Controls

2. Limit controlled components referred to as components

Delete specific 770.2(h)(4)

Delete associated 9A012, 9A012.b

3. Limit controlled contained items not using the word components

Change specially designed parts to components "required" 9A990, 9A991.c

Change parts and accessories to components "required" therefor 9A980

Change with to rated (pumps for propellant control systems) 9A106.d Note b

Change parts and accessories to components 9A012 Unit

Delete associated 9A012, 9A012.b, 9B010 (systems, equipment)

Delete parts 9A004 Related Controls (5), 9A106 Unit, 9A120 Unit, 9A610 Unit, x Note 2,y, 9A619 Unit, 9A619.y, 9A990.b,c, 9A991, 9B010 Unit, 9B610.a, 9B619.a, 9B990, 9E610 Note, 9E619 Note

Delete accessories 9A004 Related Controls (5), 9A106.Unit, 9A120 Unit, 9A990.b, 9A610.x Note 2, 9B003, 9B010 Unit

4. Limit what is excepted from control

Change destined for use in to rated for 9A991.c Note

Change related to rated 9E003.h Note

Change required to require 9E003.h Note

Delete intended 9A001.a Note b

H Replace absence of any expression

1. Limit controlled item to its controlled parameters (excluding components)

Add "required" 9B117, 9C110, 9D610.c,d, 9D619.b,c, 9D990, 9D991, 9E003.e,i, 9E610.b,c,d, 9E619.b,c,d, 9E990, 9E991

Add rated 9B105

Add as defined in the USML 9D104 Related Controls

Delete required 9D001 Related Controls (2x), 9D002 Related Controls (2x), 9E003.f.1, f.2, f.3

3. Limit controlled contained items not using the word components

Add "required" (interstages for staging mechanisms) 9A117

Add "required" (subsystems for wind tunnels) 9B105

Add "required" (subsystems for environmental chambers) 9B106

Add "required" (preforms for prepregs) 9C110

4. Limit what is excepted from control

Add rated 9E003.h Note

July 17, 2012

USML Proposed Rules and Specially Designed

Entries for Categories I, II. III. IV. XI. XII, XIV, XV, XVI, XVIII await publication in the Federal Register of proposed rules.

V.h ~~... classified ...~~ [Reserved]

V.j ~~Technical data (as defined in 120.10 of this subchapter) directly related to~~ "Software" and "technology" "required" for the operation, installation, maintenance, repair, overhaul, or refurbishing of the defense articles enumerated in paragraphs (a) through (i) of this category

VI.c ~~Developmental vessels and "specially designed" parts, components, accessories, and attachments therefor, developed under a contract with the U.S. Department of Defense.~~ [Reserved]

VI.e Naval nuclear propulsion plants for surface vessels of war, their land prototypes, and ~~special~~ facilities for their construction, support, and maintenance ...

VI.f.4 Propulsion ... systems ... and ~~parts and~~ components ~~"specially designed"~~ therefor

VI.f.5 ... CBRN compartmentalization, over-pressurization, and filtration systems, and ~~parts and~~ components ~~"specially designed"~~ therefor

VI.f.7 Any machinery, device, component, or equipment ~~specifically developed, designed, or modified~~ for use in plant or facilities controlled in paragraph (e) of this section ...

VI.f.8 Components~~, parts, accessories, attachments,~~ and equipment ~~"specially designed"~~ for integration of articles controlled by categories II, IV, or XVIII or catapults for launching aircraft or arresting gear for recovering aircraft

VI.f.9 Shipborne active protection systems ... and ~~parts and~~ components ~~"specially designed"~~ therefor

VI.f.10 Minesweeping ... and ~~parts and~~ components ~~"specially designed"~~ therefor

~~VI.f.11 Any component, part, accessory, attachment, equipment, or system that:~~

~~(i) is classfied;~~

~~(ii) contains classified software;~~

~~(iii) is manufactured using classified production data; or~~

~~(iv) is being developed using classified information.~~

~~"Classified" means ...~~ [Reserved]

VI.f Note 1 ~~Parts,~~ components, accessories, and attachments ~~"specially designed"~~ for vessels enumerated in this category but not listed in Category VI.f are subject to the EAR under ECCN 8A609.

VI.g ~~Technical data (as defined in 120.10 of this subchapter) directly related to~~ "Software" and "technology" "required" for the operation, installation, maintenance, repair, overhaul, or refurbishing of the defense articles enumerated in paragraphs (a) through (f) of this category

Sec. 121.15 Surface vessels of war and ~~special~~ naval equipment

(a)(2) are foreign-origin vessels ~~"specially designed"~~ "required" to provide

		functions equivalent to those of the vessels listed in (a)(1)
+	(a)(5)	are armed or are ~~"specially designed" to be used as~~ a platform to deliver munitions ...
	(a)(6)	... "Mission systems" are defined as "systems" ... that perform ~~specific military functions such as by providing~~ military communication, electronic warfare, target designation, surveillance, target detection, or sensor ~~capabilities~~ functions.
	(b)	~~Vessels~~ Surface vessels of war ~~"specially designed"~~ "required" for military use that are not identified in (a) of this section are subject to the EAR under ECCN 8A609
VII.b		Ground vehicles ... that are armed or are ~~"specially designed" to serve as~~ a reinforced firing or launch platform (see Sec. 121.4(a)(1) of this subchapter)
VII.g		Ground vehicle components~~, parts, accessories, attachments, and associated equipment~~ as follows:
VII.g.3		composite armor ~~parts and~~ components ~~"specially designed"~~ for the vehicles in this category
VII.g.4		spaced armor components ~~and parts~~, including slat armor components ~~and parts "specially designed"~~ for the vehicles in this category
VII.g.5		reactive armor ~~parts and~~ components
VII.g.6		electromagnetic armor ~~parts and~~ components, including pulsed power ~~parts and~~ components ~~"specially designed"~~ therefor
VII.g.8		gun mount ... and ~~parts and~~ components ~~"specially designed"~~ therefor
VII.g.10.i		rotary shock absorbers ~~"specially designed"~~ for the vehicles weighing more than 50 tons in this category
VII.g.10.ii		torsion bars ~~"specially designed"~~ for the vehicles weighing more than 50 tons in this category
VII.g.14		~~... classified ...~~ [Reserved]
VII.g Note		~~Parts,~~ components, accessories, and attachments for vehicles enumerated in this category but not listed in category VII.g are subject to the EAR under ECCN 0A606 .
VII.h		~~Technical data (as defined in 120.10 of this subchapter) directly and defense services ... related to~~ "Software" and "technology" "required" for the operation, installation, maintenance, repair, overhaul, or refurbishing of the defense articles enumerated in paragraphs (a) through (g) of this category ...
121.4(a)(1)		are armed or are ~~"specially designed" to be used as~~ a reinforced platform to deliver munitions
121.4(a)(2)		are armored support ~~vehicles capable of~~ off-road or amphibious ~~use "specially designed"~~ vehicles to transport ...
121.4(a)(3)		... "Mission systems" are defined as "systems" ... that perform ~~specific military functions such as by providing~~ military communication, electronic warfare, target designation, surveillance, target detection, or sensor ~~capabilities~~ functions.
121.4(b)		The following Ground vehicles ~~"specially designed" for military applications~~ that are not identified in (a) of this section are subject to the EAR under ECCN 0A606~~, including:~~ ..

VIII.d	Launching and recovery equipment ~~"specially designed"~~ for defense articles described in paragraph (a) of this category
VIII.f	~~Developmental aircraft and "specially designed" parts, components, accessories, and attachments therefor developed under a contract with the Department of Defense.~~ [Reserved]
VIII.h	Aircraft components, ~~parts, accessories, attachments, and associated equipment,~~ as follows:
VIII,h.1	Components~~, parts, accessories, attachments, and equipment~~ ~~"specially designed"~~ for the following U.S.-origin aircraft ... Components~~, parts, accessories, attachments~~ and equipment of the F-15SE ...
VIII.h.2	Face gear gearboxes ,,,and ~~parts and~~ components ~~"specially designed"~~ therefor
VIII.h.3	Tail boom ,,,and ~~parts and~~ components ~~"specially designed"~~ therefor
VIII.h.4	Aircraft wing folding systems and ~~parts and~~ components ~~"specially designed"~~ therefor
VIII.h.5	Tail hooks ... and ~~parts and~~ components ~~"specially designed"~~ therefor
VIII.h.6	Bomb racks ,,, and ~~parts and~~ components ~~"specially designed"~~ therefor
VIII.h.9	Non-surface-based flight control ... ~~"specially designed"~~ for aircraft
VIII.h.11	Air-to-air refueling ... and ~~parts and~~ components ~~"specially designed"~~ therefor
VIII.h.14	Lift fans ... for short take-off, vertical landing aircraft and ~~parts and~~ components ~~"specially designed"~~ therefor
VIII.h.16	Fire control computers ... ~~"specially designed"~~ for aircraft
VIII.h.17	Radomes ~~"specially designed"~~ ~~for operation in~~ multiple or nonadjacent radar bands or ~~designed to withstand~~ withstanding a combined thermal shock greater than ...
VIII.h.18	Drive systems and flight control systems ~~"specially designed" to function~~ functioning after impact of ...
VIII.h.19	~~... classified ...~~ [Reserved]
VIII.i	~~Technical data (as defined in 120.10 of this subchapter) and defense services ... directly related to~~ "Software" and "technology" "required" for the operation, installation, maintenance, repair, overhaul, or refurbishing of the defense articles enumerated in paragraphs (a) through (h) of this category ...
121.3(a)(2)	Are foreign-origin aircraft ~~"specially designed"~~ "required" to provide functions equivalent to those of the aircraft listed in (a)(1) of this section;
121.3(a)(3)	Are armored or are ~~"specially designed" to be used as~~ a platform to deliver munitions ...
121.3(a)(4)	Are strategic airlift aircraft ~~capable of~~ rated for airlifting payloads over ...
121.3(a)(5)	Are ~~capable of~~ rated for being refueled in-flight;
121.3(a)(6)	... "Mission systems" are defined as "systems" ... that perform ~~specific~~ military ~~functions beyond airworthiness, such as by providing military~~ activities of communication, radar, active missile counter measures, target designation, surveillance, or sensor ~~capabilities~~ functions
121.3(b)	The following Aircraft ~~"specially designed"~~ "required" for military applications that are not identified in (a) of this section are subject to the EAR under ~~an~~ ECCN

~~to be determined~~ 9A608, ~~including~~ :

IX.a.5	Radar trainers ~~"specially designed"~~ "required" for training on radars controlled by Category XI
IX.a.6	Training devices ~~"specially designed" to be~~ attached to a crew station, mission system, or weapon ...
IX.a.9	~~... classified ...~~ [Reserved]
IX.b.5	~~... classified ...~~ [Reserved]
IX.e.1.	~~Technical data (as defined in 120.10 of this subchapter) and defense services ... directly related to~~ "Software" and "technology" "required" for the operation, installation, maintenance, repair, overhaul, or refurbishing of the defense articles enumerated in paragraphs (a) through (b) of this category
IX.e.2	Specific "software", as follows:
IX.e.2.i	"Software" "required" for modeling or simulating or evaluating military weapon systems.
IX.e.2.ii	"Software" "required" for modeling or simulating military operational scenarios.
IX.e.2.iii	"Software" for determining the effects of conventional, nuclear, chemical or biological weapons
X.a.2	Personal protective clothing, equipment, or face paints ~~"specially designed"~~ to protect against or reduce detection by radar, IR, or other sensors of wavelengths greater than 900 nanometers.
X.a.8	~~Developmental personal protective equipment and shelters and "specially designed" parts, components, accessories, and attachments therefor, developed under a contract with the U.S. Department of Defense.~~ [Reserved] Note to ~~(a)(8)~~ (a)(2): ~~Developmental~~ personnel protective clothing, equipment and shelters, and ~~"specially designed" parts,~~ components, accessories, and attachments therefor, determined to be subject to the EAR via a commodity jurisdiction determination (see 120.4 of this subchapter) are not controlled by this paragraph:
X.d.3	~~... classified ...~~ [Reserved]
X.e	~~Technical data (as defined in 120.10 of this subchapter) and defense services ... directly related to~~ "Software" and "technology" "required" for the operation, installation, maintenance, repair, overhaul, or refurbishing of the defense articles enumerated in paragraphs (a) through (d) of this category
XIII.b	~~Information security ... equipment, cryptographic devices, software and components "specially designed" for military applications ... as follows:~~ [Reserved]
~~XIII.b.1~~	~~... capable of ...~~
~~XIII.b.2~~	~~... capable of ...~~
~~XIII.b.5~~	~~Ancillary equipment "specially designed" ...~~
XIII.f	~~... classified ...~~ [Reserved]

XIII.g Concealment and detection materials and equipment, not controlled by CCL ECCNs 1A101, 1C001, 1C101, 6B008, and 6B108, as follows ~~(MT)~~ Stealth MTCR Item 17 equipment and materials are completely covered by these CCL ECCNs.

XIII.g.2 Multi-layer camouflage systems ~~"specially designed"~~ "required" to reduce detection

XIII.g.3 High temperature ... radar absorbing material ~~"specially designed"~~ "required" for ~~use on~~ defense articles or military items subject to the EAR

XIII.g.4 Broadband (greater than ...) light weight (less than ...) magnetic radar absorbing materials ... ~~"specially designed"~~ "required" for ~~use on~~ defense articles or military items subject to the EAR

XIII.h.1 Fuel cells ~~"specially designed"~~ "required" for platforms or soldier systems specified in this subchapter.

XIII.h.2 Thermal engines "~~specially designed"~~ "required" for platforms or soldier systems specified in this subchapter.

XIII.i Signature reduction software, technical data, and services, not controlled by CCL ECCNs 1D103, 1E001, 1E101, 6E001, 6E002, or 6E101, as follows ~~(MT)~~: Stealth MTCR Item 17 software and technology are completely covered by these CCL ECCNs.

XIII.i.1 Software ~~associated with~~ "required" for the measurement or modification of system signatures.

XIII.i.2 Software "required" for ~~design~~ "development" of low-observable platforms

XIII.i.3 Software for ~~design, analysis,~~ "development," production, or optimization of signature management solutions.

XIII.i.6 Signature control ~~design~~ "development" methodology

XIII.j.1 Laser eye-safe media ... ~~"specially designed"~~ for goggles ...

XIII.j.2 ~~Specially~~ treated or formulated dyes, coatings, and fabrics ~~used in the design, manufacture,~~ for "development" or production of personnel protective clothing, equipment, or face paints ~~designed to~~ that protect against or reduce detection by ...

XIII.k.1 Tooling and equipment ~~"specially designed"~~ "required" for production of low observable ...

XIII.l.1 ~~Technical data (as defined in 120.10 of this subchapter) and defense services ... directly related to~~ "Software" and "technology" "required" for the operation, installation, maintenance, repair, overhaul, or refurbishing of the defense articles enumerated in paragraphs (a) through (h), (j), and (k) of this category, except "software" for XIII.h.3. ~~(See also 123.20 of this subchapter.)~~ (MT for technical data and defense services related to articles designated as such)

XIII.l.2 "Software" and "technology" for "development" or "production" of low observable (LO) components or portable platform signature field repair validation equipment

XIX..a Turbofan and Turbojet engines~~, whether in development, production, or inventory (including technology demonstrators), capable of~~ rated for ... thrust or greater that have any of the following:

XIX.a.1 ... ~~capable of~~ rated for ...
XIX.a.4 ... ~~capable of~~ rated for ...
XIX.a.5 ... ~~capable of~~ rated for ...
XIX.a.6 ... ~~capable of~~ rated for ...
XIX..b Turboshaft and Turboprop engines~~, whether in development, production, or inventory (including technology demonstrators), capable of~~ rated for ... shp ... or greater that have any of the following"
XIX.b.3 ... ~~capable of~~ rated for ...
XIX..c Engines~~, whether in development, production, or inventory (including technology demonstrators), "specially designed"~~ "required" for armed or military unmanned aerial vehicle systems, cruise missiles, or target drones.
XIX.e Digital engine controls ... ~~"specially designed"~~ for gas turbine engines controlled in this category.
XIX.f Components, ~~parts, accessories, attachments, or associated equipment~~ as follows
XIX.f.1 Components~~, parts, accessories, attachments, and~~ or equipment ~~"specially designed"~~ for the following U.S.-origin engines ...

Note: Digital engine controls ... ~~"specially designed"~~ for the engines identified in (f)(1) of this category are controlled by (e) of this category

XIX.f.2 ~~Hot section components ..., "specially designed" for gas turbine engines controlled this category and related cooled components ..."specially designed" for gas turbine engines controlled in this category. ...~~

These are now controlled by CCL ECCN 9A003.

XIX.f.3 Engine monitoring systems ...~~"specially designed"~~ for gas turbine engines and components controlled in this category
XIX.f.4 ~~... classified ...~~ [Reserved]
XIX.g ~~Technical data and defense services directly related to~~ "Software" and "technology" "required" for the operation, installation, maintenance, repair, overhaul, or refurbishing of the defense articles enumerated in paragraphs (a) through (f) of this category

XX.a.5 swimmer delivery vehicles ~~"specially designed"~~ "required" for the deployment, recovery, or support of swimmers or divers from submarines.
XX.b Naval nuclear propulsion plants for submersible vessels, their land prototypes, and ~~special~~ facilities for their construction, support, and maintenance ...
XX.c Components~~, parts, accessories, attachments, and associated equipment "specially designed"~~ for any of the articles in paragraphs (a) and (b) of this category
XX.d ~~Technical data (as defined in 120.10 of this subchapter) and defense services ... directly related to~~ "Software" and "technology" "required" for the operation, installation, maintenance, repair, overhaul, or refurbishing of the defense articles enumerated in paragraphs (a) through (c) of this category.
123.20.a The provisions of this subchapter do not apply to ~~equipment, technical data or services~~ "commodities," "software," or "technology" in Category VI, Category XX, and Category XVI ... to the extent such ~~equipment, technical data or services~~

"commodities," "software," or "technology" are under the export control of the Department of Energy or the Nuclear Regulatory Commission or the Department of Commerce

123.20.c A license for the export of any ~~machinery, device, component, equipment, or technical data~~ "commodity," "software," or "technology" ...

Recapitulation

A. Specially designed

1. Limit controlled item to its controlled parameters (excluding components)
   - Change specially designed to "required" 121.15.a.2, b, 121.3.b, IX.a.5, XIII.g.2,3,4, h.1, h.2, k.1, XIX.c, XX.a.5
   - Delete specially designed 121.15.a.5, VII.b, 121.4.a.1, a.2, b, 121.3.a.2, a.3
2. Limit controlled components referred to as components
   - Delete specially designed VI.c, f.4,5,8,9,10, f Note 1, g.2,3,5,8, VIII.f, h.1,2,3,4,5,6,11,14, X. a.2 Note, a.8, XIX.f.2 (2x), f.3, XX.c
3. Limit controlled contained items not using the word components
   - Delete specially designed VII.g.10.i, g.10.ii, VIII.d, h.9, 16, 17, 18, .IX.a.6, X.a.2, XIII.b, b.5, j.1, XIX.e, f, f.1, f.1 Note, f.2 (2x), f.3

G. Other terms

1. Limit controlled item to its controlled parameters (excluding components)
   - Change directly related to "required" V,j, VI.g, VII.h, VIII.i, IX.e.1, X.e, XIII.l.1, XIX.f, XX.d
   - Change associated with to "required" for XIII.i.1
   - Add "required" IX.e.2.i, e.2.ii, XIII.i.2
   - Change capable of to rated 121.3.a.4, a.5, XIX.a, a.1,4,5,6, b, b.3
   - Change design to development XIII.i2, i.3, i.6
   - Delete special VI.e, 121.15
   - Delete specific 121.15.a.6, 121.4.a.3, 121.3a.6
   - Delete capabilities 121.15.a.6, 121.4.a.3, 121.3.a.6
   - Delete capable of XIII.b.1, b.2
   - Delete specially XIII.j.2
2. Limit controlled components referred to as components
   - Delete specifically designed or modified VI.f.7
3. Limit controlled contained items not using the word components
   - Delete parts VI.c, f.4, f.5, VII.f.8, f.9, VII.g, g.3, g.4 (2x), g.5, g.6, g.8, g Note, VIII.f, h, h.1 (2x), h.2,3,4,5,6,11,14, X.a.2 Note, a.8, XIX.f, f.1, XX.c
   - Delete accessories and attachments VI.c, f.8, VII.g, VIII.f, h, h.1 (2x), X.a.8, XIX.f, f.1, XX.c
   - Delete associated equipment VII.g, VIII.h, XIX.f, XX.c
   - Delete ancillary equipment XIII.b.5