United States Department of State

Assistant Secretary of State
for Political-Military Affairs

Washington, D.C. 20520

SEP 0 3 2010

George S. Sevier
Chairman, Defense Trade Advisory Group
4040 E. Mason Lake Rd
Shelton, WA 98585

Dear Mr. Sevier:

The Administration is revising the current system for controlling the export of items subject to the International Traffic in Arms Regulations and the Export Administration Regulations (EAR). The goal is to build a system that contains one control list administered by a single licensing agency on a single information technology platform that is enforced by a primary export enforcement coordination agency. This approach will include implementing new criteria for determining what items need to be controlled and corresponding policies for determining when a license is required. The control list criteria are based on transparent rules and will create a hierarchy for applying higher walls around the most sensitive items in order to enhance national security.

A necessary step towards a single control list is to revise the U.S. Munitions List (USML) and the Commerce Control List (CCL) so that they:

- create a "bright line" between the two control lists to clarify jurisdictional determinations and reduce government and industry uncertainty about whether particular items are subject to the control of the State Department or the Commerce Department;

- are "tiered" to distinguish the types of items that should be controlled at different levels for different types of destinations, end-uses, and end-users; and

- are structurally "aligned" so that they later can be combined into a single list of controlled items by the end of the reform effort.

In order to accomplish the first task, the USML and, to a lesser degree, the CCL need to be turned into "positive lists." A "positive list" is a list that describes controlled items using objective criteria (e.g., technical parameters such as horsepower or microns) rather than broad, open-ended, subjective, catch-all, or design intent-based criteria.

The USML and CCL will also need to be tiered. In essence, items in the highest tier will comprise those that provide a critical military or intelligence advantage to the United States and are available almost exclusively from the United States, or that are weapons of mass destruction. Items in the middle tier are those that provide a substantial military or intelligence advantage to the United States and are available almost exclusively from our multilateral partners and allies. Items in the lowest tier are those that provide a significant military or intelligence advantage but are available more broadly. This flexible structure will allow the U.S. government to transition controls over a product's life cycle in order to keep lists targeted and up-to-date based on the maturity and sensitivity of an item.

The "positive list" methodology and control list criteria that the U.S. government has developed to accomplish these tasks have been provided separately. I would request that you form working groups to review categories of your selection based on the process and criteria and provide the results of your review at the next regularly scheduled Defense Trade Advisory Group (DTAG) meeting on October 20. The Designated Federal Official for DTAG will be available for conference calls or meetings, as schedules permit, to discuss with you and/or your working groups any questions or clarifications required. As always, the documents have been provided for review only by DTAG members. They may not be released or discussed outside of the DTAG, and they will not be made public until the October 20 meeting.

I welcome your comments and questions on the proposed process and related issues.

Sincerely,

Andrew J. Shapiro

Steps for Conducting Phase II Project to "Tier" and Make "Positive" the U.S. Munitions List (USML) while Simultaneously Aligning the USML with and Creating a "Bright Line" between the Commerce Control List (CCL)

I. Introduction

This document describes the background to and the process by which the U.S. Government will review and, as necessary, revise the two primary lists of items it controls – the U.S. Munitions List (USML) and the Commerce Control List (CCL). The review and revision are part of Phase II of the broad, three-phased Export Control Reform effort.

"Items," for purposes of this document, are (a) physical things such as goods, products, commodities, end-items, parts, components, and defense articles; (b) technology and technical data; and (c) software. The types of services and other transactions, licensing policies, and the lists of destinations, end-uses, and end-users that are subject to export controls, and the efforts to review and revise them, will be described in separate documents.

II. Goals of the Phase II Control List Review and Revision Effort

The purpose of the control list review effort is to enhance national security by reviewing and revising the USML and the CCL so that they:

1. are "tiered" consistent with the three-tiered criteria the U.S. Government has established to distinguish the types of items that should be controlled at different levels for different types of destinations, end-uses, and end-users ("Criteria");

2. create a "bright line" between the two lists to clarify jurisdictional determinations and reduce government and industry uncertainty about whether particular items are subject to the jurisdiction of the International Traffic in Arms Regulations (ITAR) or the Export Administration Regulations (EAR); and

3. are structurally "aligned" so that they later can be combined into a single list of controlled items by the end of Phase III.

In order to accomplish these tasks simultaneously, the USML and, to a lesser degree, the CCL must be revised so that they are aligned into "positive lists." A "positive list" is a list that describes controlled items using objective criteria such as horsepower, microns, wavelength, speed, accuracy, hertz or other precise descriptions rather than broad, open-ended, subjective, catch-all, or design intent-based criteria.

III. Background to the Control List Review and Revision Effort

A key element of Export Control Reform is that all items on the USML and the CCL must be screened against the Criteria the U.S. Government has developed to determine new control levels consistent with contemporary national security threats and other issues. Attachment 1 describes the Criteria and the scope of its three tiers.

The basic premise of the effort is that if an item type falls within the scope of one of the Criteria's three tiers, the item should be controlled for export, reexport, and in-country transfer at the level set forth in the licensing policy the U.S. Government is developing for that tier. If an item type is determined not to be within the scope of any of the three tiers, it should not be on a control list. (Items that do not meet one of the primary elements of the tiered criteria, such as being significant for maintaining a military or intelligence advantage, that must nonetheless be controlled for a separate foreign policy, statutory, or multilateral obligation, will be identified as Tier 3 items.)

The U.S. Government has also determined that, during Phase II, the USML and the CCL should be revised and aligned so that there is a clear jurisdictional "bright line" between the items subject to the control of the ITAR and the control of the EAR. As indicated by the export control pyramid below, the horizontal lines are the criteria that differentiate between the degree to which different types of items should be controlled (i.e., the "tiers") for purposes of national security and the vertical line distinguishes jurisdictional control of items subject to the ITAR or the EAR (i.e., the "bright line").[1]

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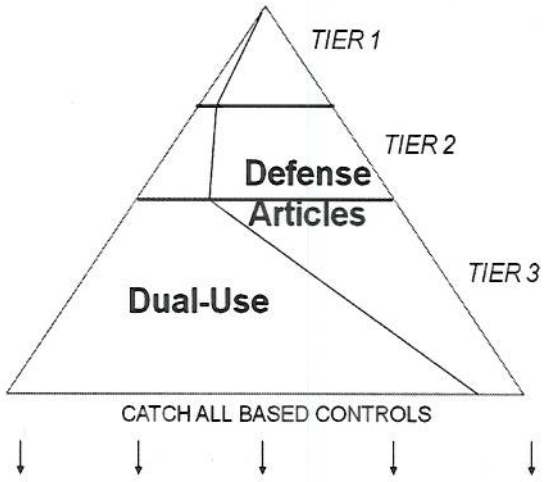
[1] The "catch-all based control" at the bottom of the pyramid refers to sanctions and embargo programs that prohibit exports and reexports to (a) certain countries, primarily Iran, Sudan, Cuba, North Korea, and Syria, (b) certain end-users such as Specially Designated Nationals and entities on Commerce's Entity List, and (c) certain end uses, such as those an exporter knows to be associated with weapons of mass destruction activities. Issues involving these controls are not addressed in this document.

Current Controlled Items and Technologies
Overlaid on the Three Tiered Concept



The U.S. Government is committed to creating a clear jurisdictional "bright line" because exporters, U.S. Government officials, and foreign parties cannot easily and consistently determine whether many types of commodities, technologies, and software – and directly related services – are subject to the ITAR or the EAR. The ability of the U.S. Government to articulate clearly the jurisdictional "bright line" to reflect national security interests is a fundamental objective of the export control reform effort.

The creation of a "bright line" is also a vital interim step in the U.S. Government's plan to have, by the end of Phase III, a single list of controlled items that is divided into three tiers and administered by a single licensing agency under a single set of export control regulations. The interim "bright line" is necessary because the structures of the USML and the CCL are significantly different. Many of the ITAR's USML controls are based on subjective or design-intent criteria. That is, regardless of an item's capability, sophistication, age, funding, lethality, end-use, or origins, it is, with some exceptions, USML-controlled if it was originally "specifically designed, modified, or adapted" for a military or space application, purpose, or use. In particular, most USML categories contain a non-specific catch-all control over every "part" or "component" that was "specifically designed or modified" for any of the defense articles listed in that category. This means, for example, that a bolt specifically modified for a military vehicle, and all technical data and services directly related to the bolt, are controlled for almost worldwide export in a similar manner to the military vehicle itself (and all the technical data and services directly related to the military vehicle).

Most of the EAR's CCL controls are based on the technical capabilities and specifications of items regardless of their intended end-use or the reasons for which they were designed. The CCL's controls are also more flexible in that different types of items are controlled differently to different groups of destinations and end-users depending on the significance of the item. In other words, the CCL is a more "positive" list with more flexible controls than the USML. The EAR do nonetheless have a significant number of export control classification numbers (ECCNs) with controls on items that are "specially designed" for some purpose or end-item. The issues

involving the definition of this term – a term that must remain in many ECCNs, at least for now, to remain consistent with multilateral obligations – are addressed below.

Because the USML contains many broad, general descriptions of the types of articles controlled, each USML category will need to be "opened" in order to further assess whether each defense article within its scope still warrants control under the USML based on national security concerns and to screen them against the U.S. Government's Criteria to create a tiered "positive list." "Screening" articles means determining which USML-controlled defense articles should remain on the USML, which defense articles could be controlled under the CCL, and which defense articles no longer require any control beyond EAR99 controls because they do not meet the criteria of any of the three tiers. "Opening" USML categories means identifying and then creating specific, positive lists of the specific types of articles the U.S. Government wants to control rather than relying on broad, general descriptions of or subjective criteria for determining when something is controlled.

IV. Steps for and Guidelines Controlling List Review and Revision Effort

The following are the steps and the guidelines the U.S. Government agencies involved in the reform effort, including any outside contractors retained to assist them, will follow when preparing proposed amendments to the USML and the CCL so that they are, with rare exceptions, aligned "positive lists" that do not overlap and are consistent with the tiered criteria. The guidelines are set out in ordered steps.

1. Step 1 – Identify the USML Categories and Related ECCNs to Be Reviewed and Revised

The USML and the CCL are too big and complex to be reviewed all at once. In order to make the project more manageable, USML categories (and related ECCNs) should be reviewed separately, albeit with an awareness to the reviews or planned reviews in any other USML category or ECCN that could affect the effort. The order of USML categories (and related ECCNs) to be reviewed should be based on an assessment of the resources available, work that has already been done with respect to the category, and which categories lend themselves to relatively easier reviews so that lessons learned can be applied to the remaining categories. It is for this reason that Category VII (military vehicles) and related ECCNs were reviewed first.

2. Step 2 – Identify the Resources Available to Reviewing and Revising Each USML Category and Related ECCNs

Defense, State, and Commerce staff will work together on each USML category / ECCN review effort. Each agency must commit to the effort by making available their staff with technical expertise in the specific items. Each team of experts will review a specific USML category and its corresponding ECCNs. An employee from one of the agencies will be designated as the primary point of contact for each team. This employee will be required to take the lead on that team's review efforts and be responsible for shepherding it by, for example, scheduling the meetings for the team, editing the proposed revisions to be submitted to the White House for

review, and coordinating any outside or other assistance.

Defense, State, and Commerce should also assemble and distill information about the licensing histories for the types of items under review by each team. For example, the agencies should analyze the licensing histories to get a better sense for the specific and general types of items that are exported under the various categories. This information will not, of course, determine what should or should not be controlled under any particular revised category, but it will help the teams articulate and describe the items to be controlled on a tiered positive list. Each review team should also gather and review any government or private studies, such as foreign availability studies or threat assessments, that might help its efforts.

3. Step 3 – Establish a Schedule for Completing the Review and Proposed Revision of Each USML Category and Related ECCNs

The plan is to have published in the Federal Register in 2011 a revised USML using positive control wording, tiered appropriately, and with revised or new ECCNs that are consistent with the Phase II goals set out in this plan. Each team working on each USML category and ECCN must factor this into their schedules, taking into account the significant amount of time that will be required for interagency review and the need to notify, work with, and explain the changes to Congress, industry, outside interest groups, the multilateral control regimes, and close allies. This schedule necessarily requires that more than one USML category (and corresponding ECCNs) be reviewed at a time by different teams.

4. Step 4 – The Experts in Each USML Category Review Team Should Generally Identify the Broad Types of Currently Designated Defense Articles that Should Remain as ITAR-Controlled Regardless of Tier

When created, the Phase III single list will have controls consistent with the Criteria and the licensing policy. Little, if any, distinction will be made between items that are now designated as "defense articles" subject to the jurisdiction of the ITAR and "dual-use" and other items that are subject to the EAR. A Tier 2 item, for example, will, according to the phased plan, be controlled the same way regardless of whether it formerly was on the USML or the CCL. During Phase II, however, the ITAR and the EAR will continue to control items separately. State will continue to administer the ITAR and Commerce will continue to administer the EAR.

Thus, the first task of each multi-agency team assigned to begin work on making a USML category, and any related ECCNs, more "positive," as described below, is to decide what general types of defense articles should remain ITAR-controlled and, thus, not transferred to the EAR or off the control lists altogether. At this stage, it is acceptable (and, indeed encouraged) for the team to apply its expertise and judgment when deciding what the general universe of defense articles should be. In making these broad jurisdictional determinations, the team's participants should draw upon their technical expertise, knowledge, and background with the items at issue and make judgment calls. It is understood that such calls will not always be based on precise, methodical tests. The teams should also determine what, if any, tasks any outside contractors available to the team could or should assist in their efforts.

The following are general types of issues the review teams should have in mind when making subjective determinations about whether an item should remain or should become USML-controlled:

- Is the item "specially designed," as the term is defined in section IV.7.5.b below, for a military or intelligence application?
- Is the item certainly or likely to be considered a Tier 1 item?
- Is the end-user of the item predominately or exclusively governments or militaries? For example, is it equipment for national security purposes that is only legal for use by governments?

None of these issues alone determines whether an item should remain or become USML-controlled, but they are nonetheless the general types of considerations the review teams should have in mind before conducting the steps listed below when making rough, subjective determinations about the types of items that should be USML-controlled. In addition, each team should make recommendations for definitions of key terms that are unique to the category they are reviewing or that are used in more than one USML category.

After a review team has generally mapped out the broad scope of items that should be USML-listed defense articles, it will then need to, as described below, translate their judgments into objective, positive control lists consistent with the three-tiered criteria. They will at the same time also need to decide what, if any, types of items that are now actually or arguably ITAR-controlled should become EAR-controlled in order to (a) differentiate items that may not need the more rigid national security and foreign policy controls of the ITAR, (b) take advantage of the EAR's more flexible country group-based controls, and (c) create a bright line between the two lists. *This task of translating subjective judgments into objective criteria is the key to the success of the entire tiered, positive list review and revision effort.*

For example, more than 90 percent of firearms exports licensed under the ITAR are for civil end-use. The majority of the remaining 10 percent are fully automatic weapons exported for military or government end-use. A rewrite of Category I could limit it to fully automatic firearms, with all other firearms equal to or less than .50 caliber moving to the CCL – to either an existing ECCN, such as a redrafted 0A018 for Wassenaar Munitions List items, 0A984 (which is currently limited to shotguns), or a new ECCN controlled for NS or CC reasons, or both. Such firearms could be controlled under the more flexible country-based controls of the EAR instead of the worldwide ITAR controls.

5. Step 5 – Begin Process of Aligning Each USML Category with the Structure of the CCL

After the team identifies the general types of items that should remain USML-controlled defense articles, it should organize each USML category so that it tracks the A, B, C, D, E structure of the CCL (which also tracks the Wassenaar Arrangement dual-use list structure) and also has an additional F and G "Group" to address ITAR-specific defense service and manufacturing

controls. That is, each revised USML category should be divided into seven "Groups:"

"A," for "Equipment, Assemblies, and Components;"

"B," for "Test, Inspection, and Production Equipment;"

"C," for "Materials;"

"D," for Software;"

"E," for "Technology;"

"F," for "Defense Services;" and

"G," for "Manufacturing and Production Authorizations."

For purposes of the list review and revision effort, these heading terms are defined as follows:

A. "Equipment, Assemblies, and Components" means any tangible item that falls within the scope of any one of the defined terms in ITAR section 121.8 – i.e., "end item," "accessory," "attachment," "associated equipment," "component," or "part" – or "commodity," as defined in EAR section 772.1, and is not "test, inspection, or production equipment," as defined for Group B, or "materials," as defined for Group C.

B. "Test, Inspection, and Production Equipment" means any tangible item that is "specially designed" to test, inspect, produce, or develop any of the types of items defined in ITAR section 121.8 or a "commodity," as defined in EAR section 772.1. Examples include machine tools, measuring equipment, lithography equipment, tape lay-up machines, templates, jigs, mandrels, moulds, dies, fixtures, and alignment mechanisms.

C. "Material" means any crude or processed matter that is not clearly identifiable as any of the types of items defined in ITAR section 121.8 or a "commodity" as defined in EAR section 772.1. Examples include the alloys, ceramics, prepregs, and raw material out of which parts, components, accessories, attachments, associated equipment, and end-items are made. Examples also include chemicals, toxins, and biological organisms.

D. "Software" means a collection of one or more programs or microprograms fixed in any tangible medium of expression. It includes object code, source code, system functional design logic flows, algorithms, application programs, operating systems, and other programs to design, implement, test, operate, diagnosis, or repair other software or items. A "program" is a sequence of instructions to carry out a process in, or convertible into, a form executable by an electronic computer. A "microprogram" is a sequence of elementary instructions, maintained in a

special storage, the execution of which is initiated by the introduction of its reference instruction into an instruction register.

E. "Technology" means, when reviewing items that are or should be on the USML, "technical data" as defined in ITAR section 120.10(a)(1). "Technology" means, when reviewing items that are or should be on the CCL, "technology" as defined in EAR section 772.1. "Technology" does not include any information that falls within the scope of "public domain," as defined in ITAR section 120.11, or "publicly available," as referenced in EAR sections 734.3(b)(2) and (b)(3).

These definitions are not intended to narrow or materially alter any term in the ITAR or the EAR. Rather, they are combinations of similar terms that are used now in the EAR and the ITAR to give structure to the tiered, aligned, positive list revision effort. A separate group will prepare proposed harmonized terms to be used in the ITAR, EAR, and the sanctions regulations by the end of Phase II, which will then be used, at the latest, in the Phase III single export control regulation. This task should not, however, affect the list review teams' efforts. The scope and meaning of and controls over defense services and manufacturing and production authorizations will be addressed separately because they are not part of the review teams' scope of work.

6. Step 6 – Identify and Divide the Remaining Defense Articles so that They Are within the Scope of One of the Criteria's Three Tiers

Within each category Group (A, B, C, etc.), the review team should identify the types of defense articles that fall within that category Group's heading <u>and</u> any one of the three control Criteria. That is, the team should describe and identify as Tier 1, 2, or 3 defense articles, respectively, all defense articles that are within the scope of the Group and the USML category being revised that:

(Tier 1): are almost exclusively available from the United States <u>and</u> that provide a critical military or intelligence advantage[2];

(Tier 2): Are almost exclusively available from Regime Partners or Adherents <u>and</u>

i. provide a substantial military or intelligence advantage; or

ii. make a substantial contribution to the indigenous development, production, use, or enhancement of a Tier 1 or 2 item; <u>or</u>

(Tier 3): Provide a significant military or intelligence advantage, make a significant contribution to the indigenous development, production, use, or

[2] As described in the Criteria, WMDs, WMD-capable unmanned delivery systems, and plants, facilities or item specially designed for producing, processing, or using WMDs, special nuclear materials, or WMD-capable unmanned delivery systems (and certain major components of these delivery systems now controlled in the MTCR Technical Annex as Item 2) are Tier 1 items. If such items are within the scope of the category being reviewed, then they should be described and identified as Tier 1 items.

enhancement of a Tier 1, 2, or 3 item.

Items controlled pursuant to multilateral agreements – i.e., Wassenaar Arrangement, Missile Technology Control Regime, Australia Group, Chemical Weapons Convention, and Nuclear Suppliers Group – that do not meet the availability or "military or intelligence advantage" control criteria in Tiers 1, 2, or 3 must be identified by the teams as Tier 3 items until and unless their control status is adjusted consistent with the procedures of the applicable multilateral agreement.

This means that the review teams should not include in any of the revised USML categories any defense articles that do not fall within any of the Criteria described above. A different group of policy officials will, with interagency consensus, decide which other types of items should nonetheless be added to Tier 3 USML or CCL controls pursuant to the Criteria for statutory, national security, foreign policy, or human rights reasons, or other multilateral obligations. Because these will generally involve non-technical policy or legal determinations, they are not within the scope of the review teams' efforts.

For all defense articles that are now controlled on the USML but the review team believes do not fall within the scope of any of the Criteria's tiers, the review team must identify the item types and explain why they believe such items are not within the scope of the Criteria described above. The review teams should write such explanations knowing that the U.S. Government may rely upon or refer to them if it decides to make Arms Export Control Act section 38(f) notifications to Congress pertaining to such defense articles.

7. Step 7 – Describe the Remaining Controlled Defense Articles in a "Positive" Way

When describing defense articles within the A, B, C, D, and E Group structure, which are then further subdivided by whether such articles fall within the scope of the Tier 1, 2, or 3 Criteria, the review teams must abide by the following guidelines so that the revised USML is a "positive list:"

1. **Positive List Guideline #1: The review teams should, to the extent possible, use objective criteria, such as precise descriptions or technical parameters, that do not lend themselves to multiple interpretations by reasonable people.**

    a. Controls on items using technical descriptions will be the most effective means of all parties involved in the export process to clearly and easily determine jurisdiction and control requirements. USML categories V and XIV are subject to few jurisdictional questions because the controls are, in the main, based on specifically identified chemical compounds.

    b. Category V also illustrates the value of using a technical parameter

to create clear controls. Both the USML and the CCL control spherical aluminum powder. The controls on the USML are limited, however, to a specific technical parameter: spherical aluminum powder "in particle sizes of 60 micrometers or less."

c. This will result in the elimination of "design-intent" or "ultimate end-use" of an item, precluding reliance on subjective or discretionary terms that have historically been difficult for industry or government to apply and consistently agree on.

2. **Positive List Guideline #2: Revised USML categories must <u>not</u> contain any (i) catch-all controls for generic "parts," "components," "accessories," "attachments," or "end-items" or (ii) other types of controls for specific types of defense articles because, for example, they were "specifically designed or modified" for a defense article.**

a. This guideline includes a prohibition on using as standards for making jurisdictional determinations in the USML or elsewhere in the ITAR general, catch-all phrases such as the following:

- are "capable for use with" a defense article;
- are "equivalent to" a defense article;
- have "significant military or intelligence applicability;"
- have a "military purpose;"
- have "military application;" or
- are "predominately used" in military applications or end items.

b. This instruction does not prohibit the control in the USML of items that have, by whatever definition, any of these characteristics. To the contrary, the instruction requires the review team to describe and identify such items if they fall within the scope of one of the three Tiers but *without* using the catch-all phrases, which are at the root of many of the difficulties in the jurisdictional aspects of the current export control system.

c. This instruction also does not mean that specific models or part numbers of components need to be identified. Rather, *types* of items should be listed. For example, the parts and components controlled under a revised USML category I would be limited to "barrels, receiver, frames, slides, bolts, and bolt carriers that fit and

function in any of the above-listed firearms." All other parts and components that fit or function in such firearms, even if specifically or specially designed or modified for them in terms of their size, shape or configuration, would become subject to the EAR and controlled under (i) existing ECCNs that describe such items, (ii), a "Holding ECCN" that controls for RS1, RS2, AT1, or possibly NS reasons, (iii) a new "Commerce Military List (CML)" type ECCN, or (iv) a new ECCN controlled for NS or other reasons.

- The guidelines governing which ECCN option governs any particular transfer to the CCL and describing the structural and implementation issues for amending or creating any such ECCNs will be addressed in a separate document. This document will be provided to the review teams for consideration before they are asked to make any final recommendations on how a USML category and any related ECCNs should be revised.

d. This guideline is a critical tool for achieving one of the essential goals of the list reform effort, which is to "de-conflict" the USML and the CCL. At the end of the process, the lists should be written so that exporters easily and consistently can determine the jurisdictional status of an article, technical data, or software – and reasonable government officials and foreign parties would reach the same conclusion about the nature of the item at issue if presented with the same facts.

e. This drafting prohibition exists because part of the reason for the USML revision exercise is to stop using terms that cause significant confusion and do not readily lend themselves to objective determinations. These terms have been at the core of most jurisdictional disputes over the decades and have thus been a distraction from the larger mission of precisely and clearly controlling items for national security and foreign policy purposes. Some are terms for which the government itself has at times been unable to reach a common agreement.

f. This Guideline #2 does <u>not</u> apply to the miscellaneous USML Category XXI. The guidelines, the limitations on and requirements for its use, and its prospective-only characteristics, will be described in more detail in a separate document that will be provided to the review teams before they are asked to make any final recommendations.

3. **Positive List Guideline # 3: Items are not to be listed on both the CCL**

and the USML unless there are specific technical or other objective criteria – regardless of the reason why any particular item was designed or modified – that distinguish between when an item is USML-controlled and when it is CCL-controlled.

a. An implication of this guideline is that if an item is listed on the CCL, an exporter is entitled to conclude that it is EAR-controlled unless there is a specific cross reference in the ECCN to the USML stating that such items that exceed the technical characteristics described in that USML category are ITAR-controlled – even if the item was specifically designed, modified, or intended for use in civil applications. If a cross-reference does not exist, then exporters will need to be instructed to check both the USML and the CCL for potential controls, particularly in situations where an item's exceeding specific technical parameters could cause it to be USML-controlled.

b. For example, an integrated circuit that falls within the technical description of ECCN 3A001 is CCL-controlled regardless of whether it was specifically designed or modified, in terms of its form or fit, to function exclusively in a military end-item unless it exceeds the radiation tolerances described in USML subcategory XV(d). An integrated circuit that exceeds such tolerances would be USML controlled regardless of why it was so designed. This example does not preclude the possibility that subcategory XV(d) may need to be amended to increase the radiation-tolerant thresholds.

c. An implication of this guideline is that all controls in the amended USML and CCL on parts and components must be at the item-type level, with technical characteristics determining whether or how the part or component is controlled for export, and not at the model or part number level by virtue of an item having been modified to fit into a particular end-item. This approach de-emphasizes the significance of "form" or "fit" in determining whether an item is USML-controlled and focuses more on its function, capability, performance, or characteristics.

4. **Positive List Guideline #4: In cases where technical characteristics are classified and need to be protected, the objective descriptions of the products controlled should be set at an unclassified level below the classified level.**

a. As a reminder, both the USML and CCL list review efforts pertain only to unclassified information (e.g., not Confidential, Secret, or Top Secret, including SCI or SAP information). This means that

USML Category XVII (Classified Articles, Technical Data and Defense Services Not Otherwise Enumerated) does not need to be reviewed or revised.

5. **Positive List Guideline #5: Use "Specially Designed" as a control criterion only when required by multilateral obligations or when no other reasonable option exists.**

   a. There are specific, identified types of end-items and generic "components" that are controlled on the Wassenaar Munitions List because they are "specially designed" for another item or some purpose. The Wassenaar Arrangement does not define the term "specially designed." Controls for such items should nonetheless carry forward to the revised USML or revised CCL in the appropriate Tier and Group with as precise of a description as possible of what is controlled. Thus, for example, the revised USML subcategory VII(g) generic, catch-all controls over components would read "Military Vehicle components ***as follows:***". The subcategory would then list the types of components controlled by that subcategory in that tier using the objective criteria set forth above.

   b. For articles that are not within the scope of the Wassenaar Munitions List or other multilateral regime but should nonetheless be listed on the USML, the term "specially designed" should rarely be used as a control parameter. Where a revised USML subcategory must use "specially designed" to remain consistent with the Wassenaar Arrangement or other multilateral regime obligation or when no other reasonable option exists to describe the control without using the term, the review team should consider and provide recommendations on the following *draft* definition of the term:

      > "For the purposes of this Subchapter, the term "specially designed" means that the end-item, equipment, accessory, attachment, system, component, or part (see ITAR § 121.8) has properties that (i) distinguish it for certain predetermined purposes, (ii) are directly related to the functioning of a defense article, and (iii) are used exclusively or predominantly in or with a defense article identified on the USML."

   c. The team should also make recommendations regarding a proposal to adopt this definition of "specially designed" – which is consistent with the MTCR's definition of the term – for the USML or CCL when the term "specially designed" needs to be used to

remain consistent with the Wassenaar Arrangement. The proposal would include addressing any USML subcategories or ECCNs where adopting this definition would not be broad enough to capture the intent of the control by going back to the multilateral regimes to adopt alternative terms with broader scope as needed or by adding a positive list of the "specially designed" parts and components consistent with the positive list process described in this document.

d. When providing recommendations on the term's definition, the review teams should remember that a key goal of this part of the effort is to agree upon a definition that will be, as nearly as possible, equally applicable to the ITAR and the EAR. To remain consistent with multilateral obligations, more ECCNs than USML subcategories may need to use the term, particularly with respect to some types of items that are moved to the CCL from the USML. It must also be a definition that uses clear, unambiguous, easy-to-apply criteria that reinforces the notion that merely altering the size or shape of an EAR-controlled item to fit into a military end-item will not cause it to become USML-controlled. For example, screws are not designed to have an inherently military function. Thus, altering the size or shape of a screw to fit into a military end-item, even if the resulting screw is used exclusively on a military end-item, should not cause the screw under the new definition of "specially designed" to become ITAR-controlled.

8. Step 8: Verify that USML Controls over "Parts" and "Components" Are Significantly Narrowed after the USML Is Screened Against the Criteria

The ITAR defines "part" in ITAR section 121.8(d) as an item that is a subset of a "component," i.e., a "single unassembled element of a major or a minor component, accessory, or attachment which is not normally subject to disassembly without the destruction or the impairment of design use," such as "rivets, wire, or bolts." The current ITAR definitions of the terms "part" and "component" have different but overlapping regulatory meanings. The Wassanaar Arrangement includes most parts in the undefined term "components." The review teams should nonetheless strive for creating and establishing a clear distinction between the terms when making their recommendations. (The teams will be provided with a set of basic regulatory interpretation rules they should keep in mind. One such rule is that different words in a regulation have different meanings unless otherwise defined. Thus, "parts" must mean something different than "components.")

Regardless of the definitional nuances, it is likely the case that the majority of "parts" and "components" that are USML-controlled have that status solely because their "form" or "fit" has been modified in some way specifically for a defense article even though their essential "function" is not inherently military. As described in ITAR section 120.4(d), the "form" is the

product's defined configuration, including the geometrically measured configuration, density and weight or other visual parameters that uniquely characterize the product, components or assembly. The "fit" is the product's ability to interface or interconnect physically with or become an integral part of another item. The "function" is the action or actions the product is designed to perform. Secretary Gates specifically called out the issue of unnecessary controls on parts like nuts and bolts during his April 20, 2010 speech on export control reform as one that needs to be resolved. Moreover, the largest impact on licensing in a manner consistent with Secretary Gates' vision likely will be achieved as a result of screening the USML against the Criteria with respect to generic controls on "parts" and "components."

9. Step 9: Identify Articles that Should Be Moved from the USML to the CCL and, in Rare Cases, from the CCL to the USML

After the tiering and positive listing described above is completed with respect to the types of articles controlled by a USML category, the review team for that category should identify the types of items in the USML category that should be moved to the jurisdiction of the EAR after any applicable Arms Export Control Act section 38(f) obligations are satisfied.

The review teams should identify for potential transfer to the CCL items that are now considered USML-listed defense articles but that, based on the teams' review, have been historically USML-controlled defense articles merely by virtue of modifications to their *form* or *fit* (as opposed to their *function*) and are types of items that do not provide substantial or significant military or intelligence advantage in and of themselves. For example, most parts and components of the drive trains of military vehicles, even vehicles potentially considered Tier 1, may not warrant continued control on the USML because of their technological simplicity.

Additionally, if a type of defense article that is an end-item and is fielded by militaries but has only insignificant military utility, is obsolete, or is capable of having anti-tamper[3] or other features that would limit such utility, then it should be considered for transfer to the CCL. If such mitigation potentially exists, the review team must draft proposed objective criteria that, consistent with the guidelines above, would enable clear divisions of control between the USML- and CCL-controlled versions.

Ultimately, the team will provide a list of USML items they recommend to "be subject to the EAR" with additional recommendations regarding the level of control required. A separate document that will be given to the review teams before they are asked to make any final recommendations will provide the options for control and the guidelines governing when the item will fall into one of five controls on the EAR: (a) an amended existing ECCN, (b) a new Holding ECCN, (c) a new CML ECCN that Commerce plans to create in coordination with

[3] This does not mean that an item with anti-tamper features *must* be transferred to the CCL, only that the team should identify or consider moves for which application of anti-tamper may reduce or eliminate the need for continued USML controls. Anti-tamper policy is a significant Defense Department concern and no USML-listed defense articles shall be moved to the CCL for anti-tamper reasons unless the Defense Department specifically approves of such a move.

State, (d) a new ECCN, or (e) when not otherwise listed and would thus become an EAR99 item.

To avoid merely transferring to the CCL (and thus not solving) all the long-standing difficulties exporters and the U.S. Government have historically faced with respect to the USML's use of the terms "*specifically* designed" and "*specifically* modified" (as opposed to "*specially*"), such terms will not be permitted in any revised ECCNs or in the new CML ECCNs. To the extent the review team cannot create a completely positive, objective list of defense articles to be transferred to the CCL and some type of catch-all criterion is warranted, the term "specially designed" must be used and defined in the manner set forth above. Although, in principle, "specially designed" is similar to "specifically designed," it, unlike "specifically designed," will eventually have a more precise and focused definition. Moreover, moving to a new term will avoid having to deal with the historical and industry-government and intra-governmental cultural baggage and confusion associated with "specifically" designed or modified.

If there are any items that are subject to the EAR that the team believes should be moved to the USML from the CCL, they should be identified as well. Because such recommended moves will occur rarely, if ever, the team will need to prepare a justification statement for why a commercial or dual-use item should nonetheless be controlled under the ITAR and also a description of the positive, objective parameters that would distinguish between a USML version and a CCL version of the item.

Tiered Export Control Criteria

1. A Tier 1 control shall apply to:

   a. A weapon of mass destruction (WMD);

   b. A WMD-capable unmanned delivery system;

   c. A plant, facility or item specially designed for producing, processing, or using:

      (i) WMDs;
      (ii) special nuclear materials; or
      (iii) WMD-capable unmanned delivery systems; or

   d. An item almost exclusively available from the United States that provides a critical military or intelligence advantage.

2. A Tier 2 control shall apply to an item that is not in Tier 1, is almost exclusively available from Regime Partners or Adherents and:

   a. Provides a substantial military or intelligence advantage; or

   b. Makes a substantial contribution to the indigenous development, production, use, or enhancement of a Tier 1 or Tier 2 item.

3. A Tier 3 control shall apply to an item not in Tiers 1 or 2 that:

   a. Provides a significant military or intelligence advantage;

   b. Makes a significant contribution to the indigenous development, production, use, or enhancement of a Tier 1, 2, or 3 item; or

   c. Other items controlled for national security, foreign policy, or human rights reasons.

Criteria Notes and Definitions

A. These criteria are not country-specific and do not pertain to or alter any of the existing "catch-all" controls prohibiting exports or reexports to or transactions with prohibited end-users (e.g., Specially Designated Nationals), prohibited end-uses (e.g., WMD-related end-uses), or prohibited destinations (e.g., Syria, Sudan, Iran, Cuba, or North Korea).

B. The term "Weapon of Mass Destruction (WMD)" means any destructive device, any weapon that is designed or intended to cause death or serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors, any weapon involving a biological agent, toxin, or vector, or any weapon that is designed to release radiation or radioactivity at a level dangerous to human life. (Note: This is directly from United States Code, Title 18, Part I, Chapter 113B, § 2332a.) This includes, but is not limited to: (1) nuclear explosive devices and their major sub-systems; (2) chemicals covered by Schedule I of the Chemical Weapons Convention; and (3) biological agents and biologically derived substances specifically developed, configured, adapted, or modified for the purpose of increasing their capability to produce casualties in humans or livestock, degrade equipment, or damage crops.

C. The term "WMD-capable unmanned delivery system" means complete rocket systems (including ballistic missiles, space launch vehicles and sounding rockets) and unmanned air vehicle systems (including cruise missiles systems, target and reconnaissance drones) that are inherently capable of delivering WMD, and major sub-systems for such delivery systems including rocket stages, re-entry vehicles, rocket engines, guidance systems and warhead mechanisms.

D. The term "item" means goods (e.g., commodities or defense articles), information (i.e., technology or technical data), and software. Controlled services will be addressed separately.

E. The term "almost exclusively available" means that the only other availability of the item is from a very small number of other countries that have in place effective export controls on the item.

F. The term "critical" means providing a capability with respect to which the United States cannot afford to fall to parity and that would pose a grave threat to national security if not controlled (i.e., "Crown Jewel"). Examples of "grave threat to the national security" include: armed hostilities against the United States or its allies; disruption of foreign relations vitally affecting the national security; the compromise of vital national defense plans or complex crypto-logic and communications intelligence systems; the revelation of sensitive intelligence operations; the disclosure of scientific or technological developments vital to national security; or critical assistance to foreign development and/or acquisition of a WMD.

G. The term "substantial" means providing a capability with respect to which the United States must maintain parity and that would pose a serious threat to national security if not controlled. Examples of a "serious threat to the national security" include disruption of foreign relations significantly affecting the national security; significant impairment of a program or policy directly related to the national security; revelation of significant military plans or intelligence operations; compromise of scientific or technological developments relating to national security; or substantial assistance to foreign development or acquisition of a WMD.

H. The term "significant" means providing a capability that could be reasonably be expected to cause damage to national security if not controlled.

I. Items controlled pursuant to a multilateral agreement – i.e., the Wassenaar Arrangement, Missile Technology Control Regime, Australia Group, Chemical Weapons Convention, and Nuclear Suppliers Group – that do not meet the control criteria in Tiers 1, 2, or 3 are treated as Tier 3 items until and unless their control status is adjusted consistent with the procedures of the applicable multilateral agreement.

CAT VII WORKING DRAFT

5 October 2010

Category VII – Tanks and Military Vehicles

A. End Items, Systems, Accessories, Attachments, Equipment, Parts and Components

1. Armed, armored, or specialized vehicles, and military equipment as follows:

a. (T1) Vehicles "developed especially" for deploying "weapons of mass destruction."

b. (T1) Vehicles "developed especially" to mount or contain any system designated as Tier 1 from any other Category.

c. Tanks

i. (T2) Tanks manufactured after 1955 with any of the following:

(a). 120 mm or larger gun;

(b). A weapon designated as a Tier 2 defense article;

(c). A fire control system or sensors designated as a Tier 2 defense article;

(d). Armored components or materials designated as Tier 2 defense articles;

(e). An autoloader or similar assisted loading/round selection;

(f). A hybrid electric propulsion drive system; or

(g). Countermeasures (e.g., radar jamming, infrared tailored smoke, electromagnetic pulse generator) designated as Tier 2 defense articles.

ii. (T3) Tanks not specified in VII.A.1.c.i. and built after 1955.

d. Armored combat vehicles, manufactured after 1955, not specified in VII.A.1.a. through c., capable of off-road or amphibious use, mounting a weapon controlled in Categories II, IV or XVIII, and that:

i. (T2) Have one or more of the following features:

(a). A weapon designated as Tier 2;

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(b). A fire control system or sensors designated as Tier 2;

(c). Armored components or materials designated as Tier 2 defense articles; or

(e). A hybrid electric propulsion drive system.

ii. (T3) Is an armored combat vehicle mounting a Category II, IV, or XVIII weapon, not controlled VII.A.1.d.i.

e. Armored combat support vehicles (e.g., personnel carriers, resupply vehicles, recovery vehicles, combat engineer vehicles, reconnaissance vehicles, bridge launching vehicles, ambulances, and command and control vehicles), manufactured after 1955, not specified in VII.A.1.a through d, and capable of off-road or amphibious as follows:

i. (T2) Having any of the following features:

(a). Sensors or mission equipment designated as Tier 2;

(b). Armored components or materials designated as Tier 2 defense articles; or

(c). The same chassis/hull as the vehicles specified in VII.A.1.c.i or d.i.

ii. (T3) Combat support vehicles not elsewhere specified in this Category with armor meeting NIJ Level III or better.

f. (T2) Trucks, trailers, or containers with installed defense articles designated as Tier 2 for command, communications, control, intelligence, sensor or radar operations, or unmanned air or ground vehicle control, except for vehicles controlled elsewhere in this Category or in other Categories.

Note: trucks, trailers, or containers that do not contain defense articles are controlled on the CCL. .

g. Unmanned ground vehicles, except those controlled VII.A.1.a to e, or in other Categories, that:

i. (T2) Have mission systems, data links, sensors, or other defense articles designated as Tier 2;

ii. (T2) Mount firearms or other weapons not designated as Tier 1;

iii. (T2) Are capable of off-road or amphibious operation; or

iv. (T3) Is a vehicle otherwise export controlled as a military vehicle that has been modified for unmanned operation.

Technical Notes:

1.) As used in this paragraph, unmanned vehicles include vehicles which are fitted with controls for either manned or unmanned operation.

2.) Vehicles in VII.A.1.g.iv that provide operation beyond visual control range are designated for Tier 2 control.

2. Components, parts, assemblies and associated equipment for the end-item vehicles controlled by this Category as follows:

a. (T2) Control modules/circuits "developed especially" for the electric hybrid propulsion drives for the vehicles specified in VII.A. of this Category.

b. Hulls, turrets or turret rings for armored vehicles controlled in this Category as follows:

i. (T2) Hulls or turrets incorporating armor controlled in VIIC.1, 2, 3.a, 7 or 8; and turret rings "developed especially" for these hulls or turrets.

ii. (T3) Hulls or turrets not controlled in VII.2.b.i and associated turret rings.

c. Armor systems, components, or parts (e.g., active protection systems, plates, appliqués, tiles) as follows:

i. (T1) Developmental armor components or parts.

ii. (T2) Transparent armor components or parts produced from armor materials controlled in VII.C.3 as follows:

a. (T2) Having E_m greater than or equal to1.3; or

b. Having E_m less than1.3 and meeting NIJ Level III standards with areal density as follows:

i. (T2) Less than or equal to 30 pounds per square foot; or

ii. (T3) Between 30 and 40 pounds per square foot.

iii. (T2) Active protection systems;

iv. (T2) Composite armor components or parts with E_m>1.4, not controlled in VII.A.2.e.ii.

v. (T2) Spaced armor components or parts, including slat armor components or parts.

vi. (T2) Reactive armor components or parts.

vii. (T2) Electromagnetic armor components or parts, including pulsed power components or parts "developed especially" for electromagnetic armor.

Technical Notes:

1.) See Technical Note after VII.C for related armor descriptions and definitions

2.) VII.A.2.c also includes B kits (add-on armor)

d. (T3) Deep water fording kits for the vehicles controlled in this Category.

e. (T2) Gun mount, stabilization, elevating systems or the vehicles controlled in this Category.

f. Self-launching bridge components for deployment by the vehicles designated as Tier 2 in VII.A.1.e. as follows:

i. (T2) Self-launching bridges that are rated above class 60 (as determined IAW SSTANAG2021/QSTAG 180 or equivalent); or

ii. (T3) Self-launching bridges that are rated at or below class 60.

g. (T3) Built-in test equipment (BITE) "developed especially" to evaluate the condition of weapon or other mission systems for the vehicles designated as Tier 2 or above in this Category. Note: This control does not apply to BITE that provides diagnostics solely for a subsystem or component not specifically controlled in this Category.

h. (T2) Suspension components as follows:

I. Rotary shock absorbers developed especially for vehicles greater than 30 tons

II. Torsion bars "developed especially" for vehicles controlled in VII.A.1.c.i. having a mass of greater than 50 tons.

i. (T2) Kits to convert a vehicle specified in this Category into either an unmanned or a driver optional vehicle. At minimum, such a kit includes equipment for remote or autonomous steering, acceleration and braking and a control system.

j. (T2) Signature management components or parts "developed especially" to modify the thermal, acoustic, radar or other electromagnetic signatures of the vehicle. This does not include components or parts commonly used with commercial vehicles (e.g. mufflers, resonators, electrical filters/capacitors, acoustic or thermal insulation).

k. (T2) Gas turbine engines, except for those controlled in other Categories or subject to the EAR for other applications, "developed especially" for vehicles in this Category

l. (T2) Hot section parts or components "developed especially" for the gas turbine engines controlled in this Category.

Notes:

1. For controls related to major systems or subsystems of the vehicles controlled above, see USML Categories I, II, III, IV, XI, XII, XIII, XIV, XV and XVIII.

2. Parts or components are controlled in this Category only to the extent listed in VII.A.2. It does not include any "part" as defined in 121.8(d) of this subchapter that is not specifically

listed. For the purposes of export or reexport, a parts "kit" that contains the unassembled elements of a component is considered a component.

3. Any part or component of the vehicles controlled in this Category that is common to a vehicle "subject to the EAR" is under the export jurisdiction of the Department of Commerce. A part or component "is common" if it is interchangeable on a one-for-one replacement basis with an item "subject to the EAR" without more than minor adjustments or minor modifications to its form or fit.

4. Developmental vehicles are controlled at the highest tier associated with the functions proposed to be accomplished by that vehicle. Once the vehicle is placed in full scale production, it is controlled as listed above.

5. Vehicles are considered manufactured after 1955 if at any time after 1955 any of the following changes occur:

a. Propulsion upgrade to a formerly gasoline powered armored vehicle with either diesel or multi-fuel capability.

b Armor upgrade to employ reactive armor.

c. Fire control upgrade with a digital control system.

d. Addition of laser designator or laser rangefinder.

e. Addition of autoloader or similar assisted loading/round selection.

f. Increase of gun bore to larger than 90 mm.

g. Conversion to unmanned operation.

6. Vehicles manufactured in 1955 or prior that retain a functional weapon are controlled based on the Category that controls the weapon

B. Test, inspection and production equipment

1. (T2) Production equipment, tooling, and test equipment "developed especially" for armored vehicles designated as Tier 2 in this Category.

2. (T3) Test or calibration equipment "developed especially" for the articles controlled in this Category.

Note:

1. For production of major systems or subsystems, see the controls specific to those items in Categories II, III, IV, etc, or in the EAR (e.g., Armor plate machining equipment and tank turret bearing grinding machines are "subject to the EAR" and controlled in ECCN 2B018).

2. This control does not apply to test, inspection and production equipment "developed especially" for a subsystem or component not specifically controlled in this Category.

C. Materials

1. (T1) Developmental armor for the vehicles controlled in this Category.

2. (T2) Spaced armor

3. Transparent armor containing a transparent crystalline laminate such as spinel, aluminum oxynitride, or sapphire as follows:

a. (T2) Having E_m greater than or equal to 1.3; or

b. Having Em less than 1.3 and meeting NIJ Level III standards with areal density as follows:

i. (T2) Less than or equal to 30 pounds per square foot; or

ii (T3) Between 30 and 40 pounds per square foot.

4. (T2) Transparent ceramic plate greater than or equal to 1/2" thick and larger than 8" x 8", excluding glass, for transparent armor.

5. (T3) Transparent ceramic plate greater than ¼" thick but less than 1/2" thick and larger than 8" x 8", excluding glass, for transparent armor.

6. (T3) Non-transparent ceramic plate or blanks greater than 1/4" thick and larger than 8" x 8" for transparent armor. This includes spinel and aluminum oxynitride (ALON).

7. (T2) Composite armor with E_m>1.4 and meeting NIJ Level III or better.

8. (T3) Metal Laminate Armor with E_m>1.4 and meeting NIJ Level III or better.

Note:

1. Composite armor is defined for this Category as:
   a. More than one layer of different materials, or
   b. A matrix composite.
2. Spaced Armors are metallic or non-metallic armors that incorporate an air space and/or obliquity or discontinuous material path effects as part of the defeat mechanism.
3. Reactive armor employs explosives, propellants, or other materials between plates for the purpose of enhancing plate motion during a ballistic event or otherwise defeating the penetrator.
4. Electromagnetic armor (EMA) employs electricity to defeat threats such as shaped charges
5. Materials used in composite armor could include layers of metals, plastics, elastomers, fibers, glass, ceramics, etc. and ceramic-glass reinforced plastic laminates, encapsulated ceramics in a metallic or non-metallic matrix, functionally gradient ceramic-metal materials, ceramic balls in a cast metal matrix.
6. For this Category, a material is considered transparent if it allows 75% or greater transmission of light in the visible spectrum through a 1 mm thick nominal sample.
7. The material controlled in VII.C.6 has not been treated to reach the 75% transmission level referenced in Note 6.
8. Metal laminate armors are two or more layers of metallic materials which are mechanically or adhesively bonded together to form an armor system. E_m is the line-of-

sight target mass effectiveness and provides a ratio of the tested armors performance to that of rolled homogenous armor.

9. E_m is the line-of-sight target mass effectiveness ratio and provides a measure of the tested armor's performance to that of rolled homogenous armor, where E_m is defined as follows:

$$Em = \frac{\rho_{RHA}(Po - \mathrm{Pr})}{AD_{Target}}$$

where:

ρ_{RHA}= density of RHA, (7.85 g/cm^2)

Po = Baseline Penetration of RHA, (mm)

Pr = Residual Line of Sight Penetration, either positive or negative (mm RHA equivalent)

AD_{TARGET} = Line-of-Sight Areal Density of Target (kg/m^2)

D. Software

1. (T2) Software "developed especially" for the integration or control of vehicle combat systems or subsystems, both offensive and defensive, that is not controlled in other Categories. This includes software that is "developed especially" to stabilize weapon motion for shooting on the move.

2. (T2) Software, algorithms, and modules "developed especially" for the design of ballistic armor protection for vehicles controlled in VII.A.1.c. through e.

3. (T2) Software "developed especially" for controlling the gas turbine engines controlled in this Category.

4. (T2) Software containing the control laws or algorithms for unmanned ground vehicles controlled in this Category.

5. (T2) Built-in test and diagnostic software "developed especially" for built-in test equipment controlled in VII.A.2.g.

6. (T2) Software "developed especially" for autonomic logistics for the vehicles controlled in this Category that are designated as Tier 2.

7. (T1) Software "developed especially" for the design, production, or use of articles controlled in this Category that are designated as Tier 1.

8. (T2) Software "developed especially" for the design, production, or use of articles specified in this Category that are designated as Tier 2.

9. (T2) Software "developed especially" for the electric hybrid propulsion drive control modules/circuits specified in VII.A.2.a of this Category.

Note: This Category does not control software for major systems, subsystems, parts or components controlled in other Categories or that are incorporated into an end item. For controls of major systems or subsystems of the vehicles controlled under A above, see USML Categories I, II, III, IV, VIII, XI, XII, XIII, XIV, XV, and XVIII. See also controls on related simulation and training items in Category IX.

E. Technology

1. Design or manufacturing technology "required" for the articles controlled in this Category as follows:
    a. (T1) Design or manufacturing technology "required" for articles controlled in this Category designated as Tier 1.
    b. (T1) Design or manufacturing technology "required" for armor materials specified in VII.C. and armor systems, components, or parts specified in VII.A.2.c. of this Category.
    c. (T1) Design or manufacturing technology "required" for rotary shock absorbers or torsion bars for vehicles specified in VII.A.1.c.i. having a mass greater than 50 tons.

This includes design technology "required" for the complete suspensions incorporating the shock absorbers and torsion bars.

d. (T1) Design or manufacturing technology "required" for armored vehicle hulls for vehicles designated as Tier 2 or better controlled in this Category.
e. (T2) Design or manufacturing technology "required" for articles controlled in this Category and not elsewhere specified.

2. Test technology as follows:
   a. (T1) Test technology directly related to defense articles designated as Tier 1 and controlled in this Category.
   b. (T1) Test technology directly related to armor materials specified in VII.C and armor systems, components, or parts specified in VII.A.2.e. of this Category.
   c. (T1) Test technology directly related to armored vehicle hull design for vehicles designated as Tier 2 or better controlled in this Category.
   d. (T2) Test technology directly related to developmental vehicles controlled in this Category or to other vehicles designated as Tier 2 that are controlled in this Category.
   e. (T3) Test technology, not elsewhere specified, directly related to defense articles controlled in this Category.

3. Technology "required" for the operation, maintenance, and repair of the vehicles controlled in this Category as follows:

   a. (T1) Technology "required" for maintenance or operation on any defense article designated as Tier 1 and controlled in this Category.
   b. (T2) Technology "required" for intermediate or depot level maintenance of any defense article designated as Tier 2 or 3 and controlled in this Category.
   c. (T3) Operator or organizational level maintenance or repair technology "required" for any defense article controlled in this Category.
   d. (T3) Operation manuals for any defense article controlled in this Category.

Note: This Category does not control technology for major systems or subsystems or subsystems controlled in other Categories or incorporated into the end item. For controls of major systems or subsystems of the vehicles specified in A of this Category, see USML

Categories I, II, III, IV, VIII, XI, XII, XIII, XIV, XV, and XVIII. See also controls on related simulation and training items in Category IX.

F. Defense Services

1. (T1) Providing assistance in the design, development, production or depot level maintenance on any defense article designated as Tier 1 in this Category.

2. (T2) Providing assistance in the design, development, production or intermediate or depot level maintenance on any defense article designated as Tier 2 in this Category.

3. (T2) Providing training or advice in the tactical employment of the vehicles designated as Tier 1 or Tier 2 and controlled in this Category.

G. Manufacturing or production

1. (T1) Granting a right or license to manufacture any defense article designated as Tier 1 in this Category.

2. (T2) Granting a right or license to manufacture any defense article designated as Tier 2 in this Category.

3. (T2) Granting a right or license to manufacture any defense article designated as Tier 3, enumerated in VII.A.1.c. through VII.A.2.e and VII.A.2.g.

4. (T3) Granting a right or license to manufacture any other defense article designated as Tier 3 in A in this Category.

DEFINED TERMS:

"Developed especially": For the purposes of this Subchapter, the term "developed especially" means that the end-item, equipment, accessory, attachment, system, component, or part (see

ITAR § 121.8); or "software"; has properties that (i) distinguish it for certain predetermined purposes, (ii) are directly related to the functioning of a defense article, and (iii) are used exclusively or predominantly in or with a defense article identified on the USML.

"Required": As applied to technology, refers to only that portion of technology which is peculiarly responsible for achieving or exceeding the controlled performance levels, characteristics or functions. Such "required" technology may be shared by different products.

"Weapon of mass destruction": Any destructive device or weapon that is designed or intended to cause death or serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors, any weapon involving a biological agent, toxin, or vector, or any weapon that is designed to release radiation or radioactivity at a level dangerous to human life. This includes, but is not limited to: (1) nuclear explosive devices and their major sub-systems; (2) chemicals covered by Schedule I of the Chemical Weapons Convention; and (3) biological agents and biologically derived substances specifically developed, configured, adapted, or modified for the purpose of increasing their capability to produce casualties in humans or livestock, degrade equipment, or damage crops.

CCL Definitions that may be related to Category VII:

"*Software*". (Cat: all)—A collection of one or more "programs" or "microprograms" fixed in any tangible medium of expression.

"Program". (Cat 2, 4, and 6)—A sequence of instructions to carry out a process in, or convertible into, a form executable by an electronic computer.

"microprogram". (Cat 4 and 5)—A sequence of elementary instructions, maintained in a special storage, the execution of which is initiated by the introduction of its reference instruction into an instruction register.

"Technology". (General Technology Note)—Specific information necessary for the "development", "production", or "use" of a product. The information takes the form of

"technical data" or "technical assistance". Controlled "technology" is defined in the General Technology Note and in the Commerce Control List (Supplement No. 1 to part 774 of the EAR).

N.B.: Technical assistance—May take forms such as instruction, skills training, working knowledge, consulting services.

Note: "Technical assistance" may involve transfer of "technical data".

"Technical data".—May take forms such as blueprints, plans, diagrams, models, formulae, tables, engineering designs and specifications, manuals and instructions written or recorded on other media or devices such as disk, tape, read-only memories.