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April 4, 2016

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

Regulatory Policy Division
Bureau of Industry and Security
Department of Commerce

Via e-mail to DDTCPublicComments@state.gov and publiccomments@bis.doc.gov

Subject: RIN 1400-AD32, ITAR Amendment - Category XII Second Proposed and RIN 0694-AF75 – EAR Amendments: Control of Fire Control, Laser, Imaging and Guidance and Control Equipment

To Whom It May Concern:

Armasight, Inc. is a U.S. Manufacturer, Supplier and Exporter of Night Vision and Thermal Imaging devices including monoculars, binoculars, goggles, clip-on, and weapon sighting systems that are designed for both military and civilian applications. The majority of our night vision devices utilize image intensifier tubes (IITs), while our thermal imaging devices utilize long wave un-cooled IRFPA based thermal imaging cores. All are sourced from domestic and foreign vendors, because Armasight does not manufacture core technology IITs or IRFPAs.

Armasight has reviewed the proposed changes to Category XII and the EAR, and while we see some additional clarity regarding the "bright line" between ITAR and non-ITAR controlled commodities, there remains a lack of clarity in many areas. We commented on the first proposed rule, and we understand that the second revision substituted a general approach of applying a "specially designed" standard instead of attempting to control items based on performance parameters. While that may be effective in some areas, our review indicates that the application of this approach in certain areas of USML Category XII and the corresponding EAR controls appears to lead to greater uncertainty about jurisdiction and classification of night vision items. We respectfully propose that, in some areas, a hybrid approach of establishing controls on the basis of performance parameters and the "specially designed" concept will result in controls that are easier to understand for exporters, regulators, and enforcement officials.

Further, in some cases, the proposed controls appear to expand the scope of controls to cover items that are currently controlled under 0A987, 6A992, and 6A993, or else blur the already

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difficult to discern line between the types of weapons sights and night vision devices controlled by the ITAR and those controlled by the EAR.

We address below portions of the proposed rules, providing our assessment and suggestions for your review and consideration.

Category XII (a)(2) and 0A987 Controls

- The proposal is to control under Category XII(a)(2):

"Weapon sights, weapon aiming systems, and weapon imaging systems (e.g., clip-on), with or without an integrated viewer, display or reticle, specially designed for an article subject to this subchapter and also incorporating or specially designed to incorporate any of the following:

(i) An infrared focal plane array having a peak response at a wavelength exceeding 1,000 nm;
(ii) Second generation or greater image intensifier tubes;
(iii) A ballistic computer for adjusting the aim point display; or
(iv) Infrared laser having a wavelength exceeding 710 nm;

- We feel that it would be helpful to clearly define what constitutes a "weapon sight" as the definitions and specification of these terms remain unclear. Over the last few years, Armasight has received conflicting rulings and opinions from DDTC and BIS as what defines a "weapon sight." Some rulings and opinions have indicated that, to be a "weapon sight", the article must have aiming capability (e.g., reticles), while others have indicated that the ability to place the sight on a weapon, regardless of aiming capability, is sufficient to make an item a "weapon sight". The conflicting views on this definition have led to our receiving unique and unusual rulings, such as a CJ that resulted in EAR jurisdiction, but indicated that the item is to be treated as a 6A992 imaging device if shipped alone, but as a 0A987 "weapon sight" if shipped together with an EAR99 universal weapon mount accessory. The particular item in question also lacks the ruggedness to survive weapon shock, but the mere theoretical ability to attach the imager to a weapon was cited as the basis for control of the item as a weapon sight. This ruling is inconsistent with the plain reading of the regulations and presents unique challenges in classifications of future products and maintenance of appropriate controls. Providing a clear definition in part 772.1 or in an explanatory note, outlining the specifications that would classify an article as a weapon sight, such as, "Unit must possess a fixed weapon mount, have an aiming reticle and user adjustable bore sighting capability, and be able to withstand weapons shock [at an appropriate performance parameter]" would eliminate some confusion within the industry and establish more consistent classifications for existent and future products. We do not feel that the term "weapon sight" is self-evident enough, in light of past agency interpretations, to allow

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exporters to self-determine jurisdiction, nor to provide adequate guidance regarding the factors to be considered in a "specially designed" analysis when applied in the CJ process. Rather, we recommend objective parameters to establish the minimum performance requirements to differentiate a military weapon sight from a sporting sight. This lack of specificity is also an issue with regard to day sights, and has led to extensive litigation in the enforcement context. We believe that the exporting community and the export control agencies would both benefit from objective parameters.

- The inclusion of clip-on systems in the same sub-category as weapons sights creates confusion. We recommend that clip-on systems be separated into another sub-category as they are multi-functional devices and are not directly related to designated weapon sights. Clip-on systems are designed for use with a wide variety of units, including but not limited to photographic cameras, spotting scopes, video cameras, weapon sights and the less common option of use as a handheld monocular. Clip-ons do not function independently as a designated weapon sight as they do not have any reticle or boresight adjustment functionality. They do not function as a weapon sight at all unless mounted in co-witness with an existing day scope. Further, only some clip-ons are appropriate for military end-use, and again the lack of any performance parameters, and reliance on the "specially designed" test would, effectively, continue the need to obtain formal CJs on all such items, and risks inconsistent outcomes between manufacturers and even within a manufacturer's product line, based on parameters known only to the government.

  Mixing the two types of items together in this listing, separated only by commas, also makes it unclear whether the phrase "with or without an integrated viewer, display or reticle" refers only to "weapon imaging systems", or whether it also modifies "weapon sights" and/or "weapon aiming systems".

- It was noted in this section that the CAT XII (a)(2) controls have captured units incorporating "second generation or higher image intensifier tubes" which would apply ITAR controls to many items that were previously controlled on the CCL. We recognize that there is a "specially designed" hurdle to jump through, but as discussed above, there is no apparent objective The current controls, keyed to the type of IIT used, that Image Intensified GEN II Weapon Sights and Weapons Imaging Systems with a Luminous Sensitivity of <350 uA/lm would be subject to CCL Control under ECCN 0A987. This new ruling would potentially pull items previously distributed under this ECCN up to ITAR control, if such items are determined to be "specially designed" for a defense article (or as we suggest is preferable, a "military end-user or end-use." It is common that the body design for night vision weapon sights is generic, with the level of control dictated by the capabilities of the image tube. Potentially applying ITAR controls

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to any weapons sight that has a Gen II tube seems inappropriate, as there are currently no U.S. suppliers of Gen II Image Intensifier Tubes. Applying ITAR controls will not protect the "crown jewels" in this case, as there are none in the United States. Weapon sights incorporating Gen II tubes are distributed worldwide by the foreign manufacturers, and generally not subject to military export controls , from the Netherlands, France, China, Russia, Serbia, Germany and India, among others. As this is a technology that is no longer manufactured within the United States, the floor for potential ITAR control should be set at controlling articles with image intensifier tubes of Generation III or higher. The primary impact of such a change would be to render the many US companies like Armasight non-competitive in the market for Gen II IIT weapons sights.

- Additionally included in this section is the comment "specially designed for an article subject to this subchapter." This would mean that any night vision weapon sight "specially designed" for any type of weapon listed in Category I would be controlled under the ITAR. Category I currently applies not just to firearms specially designed for military use, but to any nonautomatic, semiautomatic, or automatic weapon. This appears to be an overly broad definition, that would capture items that were previously controlled on the CCL as 0A987. Indeed, day scopes are currently controlled under ITAR Category I if they are "manufactured to military specifications."

  Accordingly, application of a "specially designed" standard would more appropriately reflect the current state of controls if it were to read "specially designed for a <u>military end use/user</u>". With the addition of 0A987 items to EAR part 744.9 as part of the "bookend rule", exports and reexports of 0A987 weapon sights military end use/users would require BIS licensing, which should be sufficient to address military end-use concerns regarding low-end sporting/non-military night vision weapons sights. .

Helmet Mounted Display (HMD)

- The proposed rules for Helmet Mounted Displays (HMD) listed in CAT XII(a)(10), appear to control HMD's if they merely have the ability to be connected to a Weapon Sight. Due to the string of commas, it is unclear whether the intent is to control only items that incorporate optical sights or slewing devices that have specified capabilities, or whether they would control a secondary display for a weapon sight. After multiple reads on this section, we feel that this was not the intent and that added punctuation, or perhaps sub-categorization, would prevent confusion.

  (10) Helmet mounted display (HMD) Systems or end items, incorporating optical sights or slewing devices[,] that.....

Category XII(c) controls and Category XII(e)(6) controls.

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- Category XII(c)(2)(i) reads "Binoculars, bioculars, monoculars, goggles or head or helmet-mounted imaging systems (including video-based articles having a separate near to eye display), as follows: (i) incorporating an autogated third generation image intensifier tube or a higher generation image intensifier tube;". We note that there is no "specially designed" qualifier for this sub-category – the control is based entirely on the type of IIT tube – regardless of whether that tube is "specially designed" for a USML item or military end-use. However, according to Category XII(e)(6), only "second generation and greater image intensifier tubes specially designed for articles described in this subchapter [= the entire USML], are controlled at the component level. So, in theory, a monocular that is not specially designed for a military end-use, and that does not contain an IIT that is "specially designed" for a defense article could nonetheless be subject to the ITAR since autogating is the control metric. The difficulty for an exporter like Armasight is compounded because we don't make our own tubes – we source them from U.S. and foreign vendors. Proving that an item is not "specially designed" requires knowledge of the design intent, contemporaneous documentation of it, and/or a formal commodity jurisdiction, which requires the consent of the manufacturer. It would be much clearer to simply set the control level for components and end-items that incorporate them at the same level.

- Another example of the consequences of not setting the control level evenly is if one considers Night Vision binoculars, bioculars, monoculars, goggles, or head/helmet mounted systems possessing a GEN III image tube without an autogating feature. If analyzed as an end-item, such a system would fall out of this category and onto the CCL, even though it is possible that they could contain an a "specially designed" IIT in XII(e)(6). If an integrator does not know, or cannot prove that the tube is not "specially designed", it creates uncertainty about whether such a monocular incorporating a <u>non-autogated</u> GEN III tube would be controlled. Traditionally, the Category has been subject of the unwritten "see through" rule that mandated that if an ITAR product was contained in the final assembly, that the final product would be subject to ITAR control, unless an exporter obtained a CJ confirming that the IIT had been sufficiently incorporated into a civil end-item. If the commonly applied "see through" rule were to be applied to systems falling below the specifications set forth in (c)(2)(i) (no autogating feature), they would be pulled up to ITAR control. Clarification regarding the applicability of the see-through rule to Category XII, or clearer interpretive guidance elsewhere on the ITAR that applies principles similar to EAR Part 770.2 would help remove the confusion. A note added to this paragraph addressing the applicability of a "see through" rule may be necessary to eliminate uncertainty with regard to the affected products.

Image Intensifier Tubes Subject to the ITAR

- It was noted that the new proposed rules lack consistency when describing what the specifications are for the control of Image Intensifier Tubes. It is noted in CAT XII(a)(2)(ii) that ITAR controls are applied to "second generation or greater" for Weapon

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Sight, Weapon Aiming Systems, and Weapons Imaging Systems, while CAT XII(C)(2)(i) calls out a much higher grade "GEN III Autogated or higher" for ITAR controls to apply for Monoculars and Binoculars. There is a note to CAT XII (e)(6) which makes ALL GEN II and GEN III Image Tubes subject to the ITAR if they are "specially designed" for any USML item. We have no clear sense how to differentiate between an imaging tube that is "specially designed" for a military versus a non-military application, and tubes are generally application agnostic – they are just integrated into an assembly to provide imaging capability to a sight, a monocular, a spotting scope, etc. Applying paragraph (b)(3) or (b)(4) of the "specially designed definition", one could reasonably argue that such items are not specially designed because they can be used in ITAR and non-ITAR items, but this is very difficult to prove if one is not the manufacturer of the item, and/or does not have the manufacturer's consent to submit a CJ, and/or the item was designed 40 years ago.

Given these difficulties in determining whether foreign-origin (or even US-origin) tubes are "specially designed", control over end-items would vary based on the type of item into which the tube is integrated, if one assumes – conservatively – that all such tubes are subject to the ITAR.

The practical ability to implement these controls creates greater uncertainty than the current system, as there is no "bright line" drawn on Image Intensifier Tubes, unlike in the EAR, and there is potential to pull Gen II IITs back under ITAR control if they are determined to be "specially designed" for any defense article (again, with no clear sense of what the criteria would be required to make or disprove such a conclusion on the basis of equivalent form, fit, and function, and without access in most cases to documentation regarding design intent). The current draft creates a potential for all Image Tubes GEN II and above, many previously regulated under ECCN 6A992 and 6A002, to be subject to the ITAR, unless the foreign manufacturers can provide contemporaneous data to prove their design intent. Additionally, GEN II IIT's began production over 40 years ago and at the time were "specially designed" for use by the Military, but are now an irrelevant technology for Military End Use/Users. We feel that placing the "bright line" for control of Image Intensifier Tubes would be more appropriately placed at Generation III and above for all product within Category XII. 3rd Gen technology is still actively produced within the U.S. and is a relevant standard for Military End Use. This would also avoid confusion as to which Gen II items are 6A002 and which are Category XII. We believe the NS controls applicable to 6A002 items, and the proposed new EAR controls on the military end-use/rs of 0A987 items are sufficient to address the level of sensitivity of this 40 year old technology.

- In the event that this proposed ruling becomes final with regard to GEN II Image Intensifier Tubes, it would cause additional complications with regard to the return on non-conforming materials to the foreign manufacturers of the Image Tubes. With the potential for such Image Tubes to be controlled under CAT XII(e)(6), any non-conforming materials would require a license for return back to the OEM for repair and/or

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replacement, as there is no ITAR license exception available to cover such circumstances.

Potential ITAR Coverage of Items Using 9Hz IRFPAs

- The reliance on the "specially designed" concept in the proposed rule, without setting performance floors for IRFPAs, opens the door to impose controls on items incorporating 9Hz IRFPA, currently controlled under 6A993. Such items lack military applications when used for weapon sights or other handheld imaging devices, as they provide poor image resolution and their frame rate induces eyestrain. Applying a military end-use/r restriction to such items is sufficient to control exports of such items, which are of little interest to military end-users, and even have limited interest in the commercial market. Simply the potential for ITAR control will reduce or eliminate the market share for US products.

Foreign Availability of Identical and Similar Products

- It is important to note that the technology used to manufacture night vision and thermal imaging systems is available worldwide and there are many countries currently producing systems that are of equivalent to the U.S.-manufactured goods. In the competitive international market, we are regularly informed of foreign manufacturers that have the ability to provide higher grade systems to the end user, but with far less restrictions and that can be delivered within a shorter timeframe. It is becoming increasingly difficult for U.S. companies to compete in the international market as the buyers are quickly discovering that they can purchase articles with the same performance, and have it much sooner and without having to go through the additional processes required for U.S license applications. Introducing further regulatory uncertainty into the market for Gen II capable weapon sights and monoculars will further marginalize US companies and further shield foreign competitors.

- While many of the restrictions in place are needed and justified, there are other restrictions on U.S goods that, to the competitive market, seem too stringent and have begun to push U.S companies out of the market in favor of the foreign manufacturers. This is making us non-competitive in many ways. We feel that an overall assessment of international availability and reasonable adjustments would be justified. It has become clear that foreign-manufactured items are meeting or exceeding the specifications of U.S. made goods, and U.S. companies will quickly be eliminated from competition in the international markets if we cannot offer high grade devices at fair prices without a substantial amount of wait time, paperwork and "red tape". If the regulations become too tight and the process becomes too complicated, the affected customers will buy from manufacturers outside of the United States which will provide those Foreign suppliers with the capital to continuously improve their products through investment in R&D,

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improve their manufacturing capability along with other industrial infrastructure advancements that have multiple secondary and tertiary effects in the competitive manufacturing world while U.S. technology and manufacturing capabilities atrophy in the absence of access to a robust market for its products. In addition, when a foreign customer is not buying from the USA, then we lose ground/naval/air order of battle intelligence which helps the US Armed Forces develop both tactical and strategic engagement planning. It does not appear that the proposed changes take these factors into account, given that they expand ITAR controls and remove License Exception eligibility from the EAR, further constraining an already stressed U.S. industry.

Overall Assessment of the Proposed Rules

- While there are some improvements made in the proposed rules, we feel there is still much to address to ensure that the rules are clear, concise and fair across the board. The language of the rules is still a bit confusing and allows for varied interpretations. This issue is one that has plagued many of companies in our industry, as some receive more favorable classifications than others for identical products, depending on the interpretation of the officials handling the case. Simplifying the regulations and creating more clarity will eliminate the inconsistent interpretations of the regulations and lead to a more equal and fair competitive market. In reading the proposed regulations, it is clear that a novice reader would have extreme difficulty interpreting these regulations and properly classifying products without having to file for CJs or CCATS Practically speaking, no US Customs agent will accept self-classifications in this area based on an explanation of the multi-factor "specially designed" test, when there are otherwise no performance parameters involved.

- It would make much more sense to focus ITAR controls on the limited number of IITs, IRFPAs, and thermal imaging cores that are truly at the top of the performance threshold, and which have primarily military applications. For example, it would be much clearer to simply control Gen II IITs as dual-use items, given that the U.S. military has left such technology behind and there is no U.S. manufacturer of such goods, reserving ITAR control for Gen III+ items. ITAR control should also be reserved for only high-performance, large format Vanadium Oxide/Silicon Microbolometer IRFPAs, as well as high-performance, large format compound semiconductor IRFPAs, recognizing that the parameters may differ based on detector composition

If you have any questions regarding the comments herein, or require any additional information, please do not hesitate to contact me.

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