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DEPARTMENT OF STATE

22 CFR Part 121

[Public Notice: 9852]

Notice of Inquiry; Request for Comments Regarding United States

Munitions List Category XII

AGENCY: Department of State.

ACTION: Notice of Inquiry, request for comments.

SUMMARY: The Department of State requests comments from the public regarding recent revisions to Category XII of the United States Munitions List (USML). In light of the ongoing transition of the USML to a more “positive list” pursuant to the President’s Export Control Reform (ECR) initiative, the Department requests that the public comment on 1) alternatives to controls on certain items when “specially designed for a military end user,” 2) the scope of the control in paragraph (b)(1), and 3) certain technical parameters that the Department is evaluating to replace “specially designed” controls.

DATES: The Department of State will accept comments on this Notice of Inquiry until [INSERT DATE 60 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Interested parties may submit comments by one of the following methods:

- E-mail: DDTCPublicComments@state.gov with the subject line, “Request for Comments Regarding USML Category XII.”
- Internet: At www.regulations.gov, search for this notice using its docket number, DOS-2017-0002.

Comments submitted through www.regulations.gov will be visible to other members of the public; the Department will publish all comments on the Directorate of Defense Trade Controls website (www.pmdtdc.state.gov). Therefore, commenters are cautioned not to include proprietary or other sensitive information in their comments.

FOR FURTHER INFORMATION CONTACT: Mr. C. Edward Peartree, Director, Office of Defense Trade Controls Policy, Department of State, telephone (202) 663-2792; e-mail DDTCPublicComments@state.gov.
ATTN: Request for Comments Regarding USML Category XII.

SUPPLEMENTARY INFORMATION: On December 10, 2010, the Department provided notice to the public of its intent, pursuant to the ECR initiative, to revise the USML to create a “positive list” that describes controlled items using, to the extent possible, objective criteria rather than broad, open-ended, subjective, or design intent-based criteria (see 75 FR

76935). As a practical matter, this meant revising USML categories so that, with some exceptions, the descriptions of defense articles that continued to warrant control under the USML did not use catch-all phrases to control unspecified items. As a general matter, the defense articles that warranted control under the USML were those that provided the United States with a critical military or intelligence advantage. All other items were to become subject to the Export Administration Regulations. Since that time, the Department has published final rules setting forth revisions for eighteen USML categories, each of which has been reorganized into a uniform and more positive list structure.

The advantage of revising the USML into a more positive list is that its controls can be tailored to satisfy the national security and foreign policy objectives of the U.S. government by maintaining control over those defense articles that provide a critical military or intelligence advantage, or otherwise warrant control under the International Traffic in Arms Regulations (ITAR), without inadvertently controlling items in normal commercial use. This approach, however, requires that the lists be regularly revised and updated to account for technological developments, practical application issues identified by exporters and reexporters, and changes in the military and commercial applications of items affected by the list. In addition, the USML

and the Commerce Control List require regular revision in order to ensure that they satisfy the national security and foreign policy objectives of the reform effort, which are to (i) improve interoperability of U.S. military forces with allied countries, (ii) strengthen the U.S. industrial base by, among other things, reducing incentives for foreign manufacturers to design out and avoid U.S.-origin content and services, which ensures continued U.S. visibility and control, and (iii) allow export control officials to focus government resources on transactions that pose greater concern.

Comments on Specially Designed for a Military End User Parameters:

On October 12, 2016, the Department published a final rule amending USML Category XII, effective December 31, 2016 (81 FR 70340). In the final rule, the Department adopted control text in seven subparagraphs that controls specific items when they are specially designed for a military end user. The term military end user is defined in the new Note to Category XII, as the national armed services (army, navy, marine, air force, or coast guard), national guard, national police, government intelligence or reconnaissance organizations, or any person or entity whose actions or functions are intended to support military end uses. As the Note further states, an item is not specially designed for a military end user if it was developed for both military and non-military end users, or if the item was

created for no specific end user. The Note also provides that contemporaneous documents are required to support the design intent; otherwise, use by a military end user establishes that the item is specially designed for a military end user.

As stated in the final rule, the Department adopted this control based on original design intent because the Department and its interagency partners cannot yet articulate objective technical criteria that would establish a bright line between military and commercial and civil systems. The Department is soliciting additional public input, asking for suggested control parameters for these seven entries in the final rule:

1. (b)(6) Light detection and ranging (LIDAR), laser detection and ranging (LADAR), or range-gated systems, specially designed for a military end user.
2. (c)(1) Binoculars, bioculars, monoculars, goggles, or head or helmet-mounted imaging systems (including video-based articles having a separate near-to-eye display), as follows:
 - (iii) Having an infrared focal plane array or infrared imaging camera, and specially designed for a military end user.

3. (c)(3) Electro-optical reconnaissance, surveillance, target detection, or target acquisition systems, specially designed for articles in this subchapter or specially designed for a military end user.
4. (c)(4) Infrared search and track (IRST) systems having one of the following:
 - (ii) Specially designed for a military end user.
5. (c)(5) Distributed aperture systems having a peak response wavelength exceeding 710 nm specially designed for articles in this subchapter or specially designed for a military end user.
6. (c)(6) Infrared imaging systems, as follows:
 - (viii) Gimbaled infrared systems, as follows:
 - (B) Specially designed for articles in this subchapter or specially designed for a military end user.

and

7. (c)(7) Terahertz imaging systems as follows:
 - (ii) Specially designed for a military end user.

Comments on Scope of Paragraph (b)(1):

Paragraph (b)(1) includes all laser target designators and coded target markers that can mediate the delivery of ordnance to a target. This includes a laser target designator or coded target marker that may also be used for other

purposes, including battlefield target handoff or communication of battlefield intelligence information. The Department requests that the public comment on this provision.

Comments to Assist with the Evaluation of Potential Control Parameters:

The Department is also evaluating several potential parameters. The Department is requesting that the public comment on these parameters to aid in its evaluation. Specifically, the Department requests comment on whether any civil or commercial items are described by the following parameters, including items for which civil or commercial use is anticipated in the next five years:

- A. Free-space laser communication systems specially designed for articles in this subchapter.
- B. Binoculars, bioculars, monoculars, goggles, or head or helmet-mounted imaging systems (including video-based articles having a separate near-to-eye display), having any of the following:
 - (i) A dynamically gain modulated image intensifier tube incorporating a GaAs, GaInAs, or other III-V semiconductor photocathode with a peak response in the wavelength range exceeding 400 nm but not exceeding 2,000 nm;
 - (ii) An image intensifier tube incorporating a photocathode with a peak

- response in the wavelength range exceeding 400 nm but not exceeding 2,000 nm and incorporating a focal plane array in the tube vacuum space;
- (iii) Fusing outputs of multiple infrared focal plane arrays each having a peak response at a wavelength greater than 1,000 nm;
- (iv) An infrared focal plane array with a peak response in the wavelength range exceeding 1,000 nm but not exceeding 2,500 nm with a total noise floor less than 75 electrons at an operating temperature of 300 K; or
- (v) An infrared focal plane array with a peak response in the wavelength range exceeding 7,500 nm, and a laser illuminator or pointer.
- C. Weapon sights (i.e., with a reticle), aiming or imaging systems (e.g., clip-on), specially designed to mount to a weapon or to withstand weapon shock or recoil, with or without an integrated viewer or display, and also incorporating or specially designed to incorporate any of the following:
- (i) An image intensifier tube having a multi-alkali photocathode with a peak response in the wavelength range exceeding 400 nm but not exceeding 2,000 nm and a luminous sensitivity exceeding 350 microamps per lumen;
- (ii) An image intensifier tube having a GaAs, GaInAs, or other III-V semiconductor photocathode, with a peak response in the wavelength range exceeding 400 nm but not exceeding 2,000 nm; or

(iii) An image intensifier tube having a photocathode with a peak response in the wavelength range exceeding 400 nm but not exceeding 2,000 nm and a focal plane array in the tube vacuum space.

D. Infrared imaging systems, as follows:

Mobile reconnaissance, mobile scout, or mobile surveillance systems, that provide real-time target geolocation at ranges greater than 3 km (e.g., LRAS3, CIV, HTI, SeeSpot, MMS).

E. Infrared imaging systems, as follows:

Gimbaled infrared systems (e.g., T-bar, yoke, ball turrets, or pods), as follows and specially designed parts and components therefor:

(i) Having a root mean square (RMS) stabilization better (less) than 25 microradians and incorporating an infrared camera having a peak response at a wavelength exceeding 1,000 nm with an optical angular resolution (i.e., detector instantaneous field-of-view) of 25 microradians or less;

(ii) Having an RMS stabilization better (less) than 25 microradians for any payload having any dimension of 15 inches or greater; or

(iii) Specially designed for articles in this subchapter or specially designed for a military end user.

F. Image intensifier tubes having all the following, and specially designed parts and components therefor:

(i) A peak response in the wavelength range exceeding 400 nm but not exceeding 1,050 nm;

(ii) A multi-alkali photocathode with a luminous sensitivity of 1,300 microamps per lumen or greater; and

(iii) A limiting resolution of 64 line pairs per millimeter or greater.

G. Image intensifier tubes having all of the following, and specially designed parts and components therefor:

(i) A peak response in the wavelength range exceeding 400 nm but not exceeding 1,050 nm;

(ii) A GaAs, GaInAs, or other III-V compound semiconductor photocathode having a luminous sensitivity of 1,800 microamps per lumen or greater; and

(iii) A limiting resolution of 57 line pairs per millimeter or greater.

H. Image intensifier tubes having all of the following, and specially designed parts and components therefor:

(i) A peak response in the wavelength range exceeding 1,050 nm but not exceeding 2,000 nm; and

(ii) A GaAs, GaInAs, or other III-V compound semiconductor

- photocathode having a radiant sensitivity of 10 milliamps per watt or greater.
- I. Infrared focal plane arrays or dewars specially designed for optical augmentation reduction.
 - J. Infrared focal plane array dewar assemblies with peak response in the wavelength range greater than 3,000 nm but not exceeding 14,000 nm, and having a variable aperture mechanism.
 - K. Infrared focal plane arrays having all of the following:
 - (i) A peak response in the wavelength range exceeding 710 nm but not exceeding 1,100 nm;
 - (ii) A non-binned pixel pitch of 10 microns or greater;
 - (iii) More than 1,024 detector elements in any direction; and
 - (iv) Total noise of 3 electrons or less at an input light level of 1 millilux, in a binned or non-binned operating mode, and measured at an ambient operating temperature of 300 K.
 - L. Infrared focal plane arrays having greater than 81,920 but not exceeding 327,680 detector elements, a peak response in the wavelength range 1,100 nm but not exceeding 1,700 nm, and any of the following:
 - (i) Noise equivalent irradiance less than 829 million photons per centimeter squared per second;

(ii) Readout integrated circuits capable of pulse interval modulation decoding or pulse repetition frequency decoding (e.g., an asynchronous detector read out integrated circuit, frame rates windowed or non-windowed greater than 2,000 Hz); or

(iii) Temperature dependent non-uniformity correction (e.g., without the use of a temperature stabilization)

Note: Noise equivalent irradiance is defined as a ratio with the numerator comprised of the focal plane noise floor in units of electrons at a focal plane array temperature of 300 K and the denominator as the multiplied value of detector area in square centimeters, spectral quantum efficiency at 1,550 nm, and an integration time of 0.032 seconds.

M. Infrared focal plane arrays having greater than 327,680 detector elements, a peak response in the wavelength range exceeding 1,100 nm but not exceeding 1,700 nm, and any of the following:

(i) Noise equivalent irradiance less than 1.54 billion photons per centimeter squared per second;

(ii) A readout integrated circuits capable of pulse interval modulation decoding or pulse repetition frequency decoding (e.g., an asynchronous detector read out integrated circuit, frame rates windowed or non-windowed greater than 2,000 Hz); or

(iii) Temperature dependent non-uniformity correction (e.g., without the use of temperature stabilization)

Note: Noise equivalent irradiance is defined as a ratio with the numerator comprised of the focal plane noise floor in units of electrons at a focal plane array temperature of 300 K and the denominator as the numerator to the multiplied value of detector area in square centimeters, spectral quantum efficiency at 1,550 nm, and an integration time of 0.032 seconds.

N. Infrared focal plane arrays having greater than 327,680 detector elements, a peak response in the wavelength range exceeding 1,700 nm but not exceeding 3,000 nm, and any of the following:

(i) Readout integrated circuits capable of pulse interval modulation decoding or pulse repetition frequency decoding (e.g. an asynchronous detector read out integrated circuit, frame rates windowed or non-windowed greater than 2,000 Hz);

(ii) A total noise floor less than 75 electrons at an operating temperature of 300 K; or

(iii) A detector pitch less than or equal to 20 microns.

O. Infrared focal plane arrays having an internal quantum efficiency exceeding 10 percent anywhere in the wavelength range exceeding 3,000

nm but not exceeding 7,500 nm and any of the following:

- (i) A detector pitch less than 12.5 microns; or
- (ii) More than 1,331,200 detector elements.

P. Infrared focal plane arrays having a peak response in the wavelength range exceeding 7,500 nm but not exceeding 30,000 nm, and all of the following:

- (i) A detector element of the photon, not thermal, type;
- (ii) A detector pitch less than or equal to 30 microns; and
- (iii) Greater than or equal to 262,144 detector elements.

Q. Infrared focal plane arrays having a peak response in the wavelength range exceeding 7,500 nm but not exceeding 14,000 nm and all of the following:

- (i) A detector element of the photon, not thermal, type;
- (ii) Greater than 300 detector elements; and
- (iii) Time delay integration of detector elements.

R. Microbolometer focal plane arrays having an unfiltered response in the wavelength range exceeding 7,500 nm but not exceeding 14,000 nm and any of the following:

- (i) Vacuum packaged and specially designed to withstand weapon shock;
- or

- (ii) Greater than 328,000 detector elements with a detector pitch less than or equal to 14 microns.
 - S. Infrared focal plane arrays specially designed to provide distinct outputs corresponding to more than one spectral band, and having all the following:
 - (i) Multiple spectral bands with a photo-response in the wavelength range exceeding 1,100 nm but not exceeding 14,000 nm; and
 - (ii) A detector element pitch less than 50 microns.
 - T. Digital low-light-level sensors incorporating a photocathode and a focal plane array within the vacuum space, with a peak response in the wavelength range exceeding 400 nm but not exceeding 2,000 nm, and having any of the following:
 - (i) A photocathode with a luminous sensitivity greater than 1,800 microamps per lumen; or
 - (ii) Greater than 2,040,000 focal plane array detector elements.
 - U. Analog readout integrated circuits specially designed for articles in this subchapter.
- and
- V. Digital readout integrated circuits specially designed for focal plane arrays having a peak spectral response in the wavelength band exceeding

1,100 nm but not exceeding 30,000 nm, a digital signal output, and any of the following:

(i) Dynamic range greater than 54 dB; or

(ii) Pixel read-out rate greater than 540 million bits per second.

The Department will review all comments from the public. If a rulemaking is warranted based on the comments received, the Department will respond to comments received in a proposed rulemaking in the Federal Register.

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