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Ms. Sarah J. Heidema,
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DDTCResponseTeam@state.gov

Publiccomments@bis.doc.gov
Regulatory Policy Division
Bureau of Industry and Security, U.S. Department of Commerce
Room 2099B, 14th Street and Pennsylvania Avenue NW, Washington, DC 20230

VIA: www.Regulations.gov

RE: Comments on Proposed Amendment to the International Traffic in Arms Regulations:
Revision of U.S. Munitions List (USML) Category XI RIN [1400-AD25] And Revision to the Export Administration Regulations (EAR) RIN [0694-AF64]

Dear DDTC Response Team and Regulatory Policy Division:

The University of California San Diego (UCSD) is pleased to respond to the July 25th, 2013 Federal Register notice seeking comments on Revisions to the US Munitions List Category XI and Revisions to the Export Administration Regulations.

UC San Diego and Scripps Institution of Oceanography
UC San Diego is an academic powerhouse and economic engine, recognized as one of the top 10 public universities by *U.S. News & World Report* and ranked number one in the nation for public service by the *Washington Monthly*. UC San Diego's FY 2012 revenues were $3.4 billion; 29 percent of this total is revenue from contracts and grants, most of which is from the federal government for research. The funding supports fundamental research in medicine, the sciences, the arts, oceanography, engineering and other fields.

A department of UC San Diego, Scripps Institution of Oceanography (SIO) is one of the oldest, largest, and most important centers for ocean and earth science research, education, and public service in the world. Research at SIO encompasses physical, chemical, biological, geological, and geophysical studies of the oceans and earth. With more than a century of exploration and discovery in global sciences, Scripps Oceanography is the world's preeminent center for ocean and earth research, teaching, and public education.

I have polled our SIO research scientists for comments on the Category XI and EAR revisions impacting their fundamental research activities. I am providing the following comments on their behalf for consideration to Department of State and Department of Commerce in revising the proposed export control regulations.

Research in International Waters-Difficulties with ITAR Licensing
SIO researchers use a number of ITAR and EAR controlled tools and technologies for fundamental research like basic ocean science and climate change, acoustic monitoring of marine mammal research, or electromagnetic ocean floor research associated with oil and gas exploration or seismic studies. The research equipment are commonly used by the University within fundamental research programs conducted in International Waters funded by National Science Foundation (NSF), National Oceanic and Atmospheric Administration (NOAA), and the Office of Naval Research (ONR). The conduct of research in International Waters performed by SIO requires the time consuming process of obtaining ITAR licenses for Category XI electronics used in support of fundamental research. Under the present regulatory regime, ITAR considers research brought by US Nationals into International Waters 12 nautical miles off the coast of the United States as an export, while the EAR rules do not, unless another country is involved or the items are brought into a foreign destination. The current ITAR licensing regime places an undue burden on fundamental scientific research missions funded by US agencies and add costly delays.

Under the EAR, a simple day long voyage just twelve miles off the coast from our facilities in La Jolla, California into International Waters for the purpose of data collection would not require an export license. A day's trip out to observe marine mammals involve first going through the ITAR application process, consuming time and resources for both the non-profit university as well as all federal reviewing agencies obtaining an export license which may take 3 months to obtain from Department of State. Harmonizing the definition of "Export" between the ITAR and EAR should also be considered insofar as research efforts conducted in International Waters are concerned or allowing such voyages to claim a license exception like the EAR temporary export (TMP), would support important University research, while achieving the aims of export control reform.

Request for Wording Changes to ITAR Category XI
SIO would like to point out three areas in the proposed revisions to Category XI that could be improved by rewording and providing more specificity on controlled items. Acoustics and bioacoustics research have dual use purposes. ITAR controls on military acoustics systems should be specific enough that they do not inadvertently encompass dual use equipment. SIO requests that the following items be considered for revision to Category XI:

1. Category XI (a) (i) page 45022:
   Active or passive acoustic array sensing systems or acoustic array equipment capable of real-time processing that survey or detect, and also track, localize (i.e., determine range and bearing), classify, or identify surface vessels, submarines, other undersea vehicles, torpedoes, or mines, having any of the following:
   (A) Multi-static capability;
   (B) Operating frequency less than 20 kHz; or
   (C) Operating bandwidth greater than 10 kHz;

- We request this be revised from "capable of real-time" to be replaced by "intended for real-time".
  - Passive towed array systems exist for tracking and classifying marine mammals in real time that operate under 20 kHz with greater than 10 kHz bandwidth. These systems are "capable" of tracking vessels (and do).

2. Category XI (a) (ii) page 45022:
   Underwater single acoustic sensor system that distinguishes tonals and locates the origin of the sound;

- We request this be revised to be more specific (.e.g.) "Underwater single acoustic sensor systems that distinguishes tonals and classifies the type of vessel making the sound".
  - "Origin" is confusing: it can mean "classify" (as in the origin of the sound is a submarine) or "localize" (the sound originates from 10 km away and 100 m depth).
  - Many researchers would like to use acoustic vector sensors to locate and identify natural acoustic activity. These sensors can locate sounds, but not necessarily classify them. So if the regulatory intent is to classify (e.g. identify particular tonals as submarines) the regulations could state that "classification" is the goal.

3. Category XI (12) (i) page 45024:
   (12) Underwater sensors (acoustic vector sensors, hydrophones, or transducers) or projectors specially designed for systems controlled by paragraphs (a) (1) and (a) (2) of this category, having any of the following:
   (i) a transmitting frequency below 10 kHz;

- We request this be revised to: (i) a transmitting frequency below 10 kHz for active sonar systems.
  - This avoids situations were underwater projectors are used to observe responses of marine animals to underwater sound.

Request for ITAR Category XI (a(1)) Items to be Transferred to the CCL
We request that certain technologies listed under XI (a(1)) be considered for migration to the EAR's Commerce Control List (CCL).

- Q-Tech 2002 Microcomputer Compensated Crystal Oscillator is controlled under ITAR XI(c) and we request that it be removed from the USML and transitioned to CCL. This component is no longer being manufacturer and being replaced by the higher performance Symmetricom Chip Scale Atomic Clock (CSAC), which is not ITAR controlled and has the same function and classified as EAR99.

- Geometrics GeoEel 1250, digital towed hydrophone system, is controlled under ITAR XI(c) and we request that it be removed from the USML and transitioned to CCL to ECCN of 6A006. These were originally designed as dual use items for oil and gas, engineering surveys and sub-bottom profiling. SIO uses these for conducting low-energy seismic and sediment coring surveys for climate variability for fundamental research under NSF funding.

Underwater electronic hardware, including acoustic arrays may have a dual-use purpose and should be vetted for consideration for control under the EAR when serving a non-military purpose in support of research performed at the academic level for such diverse uses as ocean floor surveys and the study of marine life.

We appreciate the opportunity to provide input regarding export control regulations to enable the government to understand how the technologies we are developing and using are being impacted by export controls. The research enterprise in the United States is critical to the economic advancement of our country and having export regulations that enable researchers through the movement of items and technologies to the Commerce Control List ensure that innovation is not stifled in performing fundamental research.

Any further questions on these comments should be directed to me, Brittany Whiting, UC San Diego Export Control Officer at (858) 534-4175 or brwhiting@ucsd.edu .

Sincerely,

Brittany Whiting
Export Control Officer

Cc:
Marianne Generales, UC San Diego Assistant Vice Chancellor for Research
Brian Warshawsky, University of California Office of the President Systemwide Export Control Officer