Regulatory Policy Division
Room 2099B
U.S. Department of Commerce
Bureau of Industry and Security
14th Street & Pennsylvania Avenue, NW
Washington, D.C, 20230

Office of Defense Trade Controls Policy
U.S. Department of State
2401 E Street NW
Washington, D.C. 20037

July 8, 2013

References: RIN 0694-AF87 and RIN 1400-AD33

Re: Comments Concerning Proposed Rules – Export Administration Regulations (EAR): Control of Spacecraft Systems and Related Items the President Determines No Longer Warrant Control Under the United States Munitions List (USML) and Revision of U.S. Munitions List Category XV and Definition of Defense Services

Dear Sirs and Madams:

International Business Machines Corporation (IBM) hereby submits these comments in response to the proposed rules outlined in the following Federal Register notices: Control of Spacecraft Systems and Related Items the President Determines No Longer Warrant Control Under the United States Munitions List (USML), 78 Fed. Reg. 31431 (May 24, 2013) and Amendment to the International Traffic in Arms Regulations: Revision of U.S. Munitions List Category XV and Definition of "Defense Service", 78 Fed. Reg. 31444 (May 24, 2013) (the Proposed Rules).

IBM appreciates this opportunity to share its views concerning these important rules. As detailed below, IBM strongly supports the Proposed Rules and urges the Commerce and State Departments to implement the proposed changes concerning the treatment of radiation-hardened integrated circuits (ICs) immediately.

IBM provides information technology products and services to customers in more than 170 countries and employs more than 420,000 persons based in 75 countries. Among its cutting edge products, IBM delivers a range of semiconductor technologies designed for a wide variety of mobile and wired consumer products, commercial electronics and computers. Microelectronic products such as ICs, custom logic chips and other semiconductor chips are designed and manufactured in our facilities in East Fishkill, New York, and

Burlington, Vermont, and with a consortium in Albany, New York, at the College of Nanoscale Science and Engineering of the University of Albany. Design and development activities for these products (as well as the commercial electronics and computers that utilize these products) also occur in a variety of other IBM U.S. locations, supporting many good, high-paying jobs across the United States.

IBM supports the goals of the Export Control Reform Initiative that began more than three years ago. In particular, we strongly agree that there is a need to update controls to make them more relevant to 21st century technology while strengthening national security. We agree with former Secretary of Defense, Robert Gates, who stressed the theme of higher fences around fewer items. Given limited resources in both the U.S. Government and the private sector, the overall goal should be to establish an updated framework that is focused on items that truly warrant controls and dispense with outdated legacy controls that consume resources and yield no value in terms of national security.

I. Proposed Changes to Treatment of Radiation-Hardened ICs

Since the development of early ICs, technology has been constantly advancing to make ever smaller and more densely packed ICs. Advances in lithography and the use of new materials have enabled the industry to rapidly reduce the size of advanced ICs. These same advances also have enabled ICs nearly to reach the point of meeting the five criteria in the existing Category XV(d) of the USML, which would subject these ICs to control under the International Traffic in Arms Regulations (ITAR) though they are mass market commercial ICs. The U.S. Government recognized this evolution in the IC manufacturing process in 2007 when one of the radiation hardened parameters in the ITAR was modified expressly to prevent these controls from unintentionally capturing inherently commercial ICs.

Notwithstanding this industry wide semiconductor technology trend, it was never the industry's intent to exceed the ITAR parameters in the designs of ICs. The intent was always simply to provide our customers and internal business units with the latest and most responsive ICs for their products. The overwhelming majority of IBM's business is in the marketplace for ICs in commercial terrestrial devices such as computer systems, routers and other high speed communications products, cell phones and other electronics.

As a result, IBM has a particularly strong interest in the reforms included in the Proposed Rules as they update and clarify the dividing line between conventional dual-use semiconductor products and what will be treated as specially designed ICs either in the new category 9A515(d) or specially designed military ICs that will remain on the USML. **Today we strongly endorse the proposed revisions to the treatment of radiation-hardened ICs. Once finalized, these revisions will add clarity for the civilian**

semiconductor industry and avoid the improper classification of ordinary dual-use items and the products that use them.

II. Accelerated Implementation of a Final Rule

While the Proposed Rules will substantively address this critical issue facing the semiconductor industry, the timing of the final implementation is also of crucial importance. IBM is extremely concerned that implementation of the Proposed Rules may occur too late to avoid the inappropriate capture by the USML of many commercial ICs that, due to the rapid advance of semiconductor technologies, meet or exceed all five of the technical parameters contained in USML XV(d) but were developed for civilian applications and not specially designed for defense articles.

Often overlooked is the fact that design and development decisions are made years ahead of actual production runs of a particular IC. Negotiations between partners in the globally integrated semiconductor industry are occurring now, and business decisions on ICs two to three generations ahead of current products are occurring. The lengthy implementation dates of the Proposed Rules will potentially impact business decisions this year, along with design activity for 2013 and 2014, and have negative repercussions for US competitiveness. Absent a rapid adoption of the Proposed Rules, a cascade of negative impacts could affect our company's business. These could include:

- Partners may be hesitant to join with IBM on future designs until regulatory uncertainty is cleared, resulting in lost business opportunity.
- IC designs could be downgraded to avoid the risk of meeting all of the current ITAR technical parameters, resulting in less innovative products brought to market.
- A flood of export licenses could be needed to allow commercial business to proceed, resulting in product delays and loss of competitive position.

In short, the lengthy implementation period for the Proposed Rules likely will have a direct impact on IBM's (and other similarly situated U.S. semiconductor companies') ability to conduct commercial business in the ordinary course, risking our technological edge, revenues and jobs. The expected timeframe which allows for the U.S. Government to review and respond to comments, followed by an informal and finally a formal notification to Congress places the release of a final rule late in 2013. The addition of a subsequent 180 day delay in implementation puts an effective date sometime in mid-2014. For an industry driven by speed and where competitive advantage is sometimes measured in days, this extended implementation creates a high level of uncertainty and risk. **Given this situation, IBM urges the Commerce and State Departments to waive the proposed 180-day implementation period and to adopt**

immediately the elimination of USML Category XV(d) and the new 9A515(d) provision upon publication of the final rules.

III. Definition of "Successful Testing" for Purposes of Identifying "Space Qualified" Items

As noted above, IBM strongly supports the immediate adoption of the Proposed Rules as drafted. However, to the extent the Administration considers modifying the proposed definition of "space qualified" to define "successful testing," IBM recommends that any ultimate change reflect the broad set of industries potentially affected by the definition. What "successful testing" means to one industry might be different than what it means to another. This might simply be resolved by making explicit reference to industry-accepted testing standards for items to be used at altitudes greater than 100 km above the surface of the Earth. To that end, the first note concerning the definition of "space qualified" could be revised as follows (with new text underlined):

> **Note**: A determination that a specific item is "space qualified" by virtue of testing does not mean that other items in the same production run or model series are "space qualified" if not individually tested. <u>While specific testing criteria vary among industries, for an item to be tested successfully, it must be tested against industry-accepted standards for operation at altitudes greater than 100 km above the surface of the Earth.</u>

IV. Conclusion

The Departments of Commerce, State and Defense, as well as other government stakeholders, have worked extensively to bring well-reasoned Proposed Rules concerning this complex category. IBM believes that the Proposed Rules will address the semiconductor industry's urgent issues related to radiation-hardened ICs. However, we also need a rapid implementation. It would contravene both common sense and the express purpose of the Administration's Export Control Reform Initiative if large numbers of commercial products become subject to ITAR control simply due to delay in implementation of the Proposed Rules. Therefore, IBM urges the Administration to prevent that from occurring by waiving the 180-day implementation period and adopting immediately the elimination of USML Category XV(d) and the new 9A515(d) provision upon publication of the final rules.

We thank you for the opportunity to comment.

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