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July 8, 2013

Mr. Dennis Krepp
Director
Office of National Security and Technology Transfer Controls
Bureau of Industry and Security
U.S. Department of Commerce
14th Street and Pennsylvania Avenue NW
Washington, DC 20230

Subject: **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")**

Reference: **RIN 0694-AF87**
Federal Register/Vol. 78, No 101/Friday, May 24, 2013

Dear Mr. Krepp,

The Boeing Company ("Boeing") welcomes the opportunity to comment on the referenced Proposed Rule.

Overall, Boeing believes the Proposed Rule to be well thought out and supportive of maintaining a robust U.S. industrial base while at the same time protecting unique U.S. technologies critical to national security. To achieve a level playing field in this area of growing economic importance we recommend consideration of the following changes:

- **Delete Related Control Note (6) to ECCN 9A004 and update ECCNs 9E001 and 9E002 to control items previously controlled therein:** Presently, certain technical data and defense services associated with the International Space Station ("ISS"), controlled under ECCN 9A004, require a Technical Assistance Agreement ("TAA") from the Department of State be executed with foreign parties. This action, taken in collaboration with NASA on the U.S. National Lab (or ISS), creates a burden in satisfying support and sustainment on the orbiting ISS. Because the ISS is long-past its design phase, Boeing believes that the Related Control Note (6) of ECCN 9A004 is no longer necessary and should, therefore, be deleted. The items currently captured by Note 6 would be more appropriately controlled under the current requirements found in ECCNs 9E001 and 9E002.

- **Clarify 9E515(a) and (b).** Paragraphs (a) and (b) have remarkably similar language, particularly when using the terms "development" and "production." This has made interpreting the differences between the two paragraphs confusing. It is our understanding that the Department of Commerce's objective here was to capture more sensitive technologies in paragraph (b) and make such technologies unavailable for the STA Exception. However, this objective is not clear as currently drafted. Therefore, we request that the two paragraphs be rewritten to clarify the control parameters and suggest that the Department of Commerce harmonize these controls in the same manner used to carve-out hot section components.

- Under existing controls, licensing is required to return non-U.S. origin items located in the U.S. to their non-U.S. owners or locations of their choosing. This requirement may make satellite owner-operators reluctant to place their assets in the United States and may encourage them to locate their equipment elsewhere outside the United States. Our satellite owner-operator customers would like to be able to move their equipment in and out of the United States more easily. We encourage BIS to develop its new licensing requirements on 9X515 items to facilitate such equipment transfers.

- Under current export licensing requirements, if there is an anomaly on a foreign-owned satellite, either during the manufacturing process or on-orbit, the U.S. satellite manufacturer must obtain an export license in order to share the results of its analysis of the anomaly and recommended corrective actions, but is prohibited from sharing the engineering analysis behind these results and recommendations. This lack of transparency for the foreign owner-operator to understand the reasons behind these results and recommendations is a detriment to their understanding of how to restore or reconfigure an investment that can cost hundreds of millions of dollars. As BIS develops its licensing parameters for 9E515 technical data, we encourage the authorization of the ability of U.S. satellite manufacturers to share this data with their non-U.S. owner-operator customers.

We would also like to note that, under the current ITAR, nationalities of employees include not just the country of citizenship, but also country of birth causing employees from proscribed countries to be reassigned. Even though the ITAR allows for foreign recipients of U.S. defense items subject to the ITAR to screen employees for "substantive contacts," the question is still open as to whether such screening violates privacy laws of the foreign recipient's country. We are encouraged that, once control of spacecraft systems and related items determined to no longer warrant control under the USML move to the EAR, the Department of Commerce's

treatment of nationality based on country of citizenship rather than country of birth will address this concern.

Additionally, we take this opportunity to highlight points previously raised in our comment letter to the Department of State on revised U.S. Munitions List ("USML") Category XV. Of particular note, the following issues were identified as having a potentially negative impact on commercial space systems:

- Military hosted payloads on commercial satellites should not render either the commercial satellite or other commercial payloads that may also be included in the overall payload as ITAR-controlled. The proposed language of USML Category XV(e)(17) could be interpreted to change the jurisdiction of the entire satellite if a hosted payload attached thereto were to perform functions covered under Category XV(a). We recommend that the ITAR's so-called "see-through" rule not be applied in such circumstances, and request instead clarification that merely hosting a payload meeting the criteria of USML Category XV(e)(17) does not make an otherwise commercial satellite and/or other commercial payloads ITAR-controlled.

- The Boeing Crew Transportation 100 ("CST-100") vehicle is designed and developed exclusively for commercial space activities but is captured under this paragraph because: (1) it is an orbital vehicle; and (2) it is man-rated. What makes this spacecraft so unique, however, is that it will afford safe, reliable commercial transportation involving commercial passengers (non-astronauts) from the Earth's surface to orbiting space complexes in Low Earth Orbit ("LEO"), including the International Space Station ("ISS") and the Bigelow Space Complex.

  When operating as described above, the CST will be strictly a commercial transport, the only difference being that it will be piloted by an astronaut. While the pilot will have access to controlled technology—and we understand that such technology will remain under the ITAR, DDTC has already determined by Commodity Jurisdiction (DDTC Case CJ 320-3 of June 14, 2013) that passenger training on the travel experience will be subject to the EAR and not listed on the CCL.

  Because the CST-100 was designed and developed for commercial space activities, Boeing recommends that this and any other similar spacecraft that may be developed in the future be subject to the EAR.

- Future applications of commercial aircraft GPS receiving equipment may rely on null steering antennae to help eliminate noise interference from other applications working close to the GPS transmission bandwidth. Null steering antenna may also be applied to a

civil GPS receiver to ensure signal reception in the case of intentional criminal activity directed against a commercial aircraft positioning system. As currently drafted, revised USML Category XV(c)(3) would capture such GPS receiving equipment. Therefore, Boeing recommends that such items be subject to the EAR. Due to the proprietary nature of some information, Boeing cannot include additional commentary here but would be pleased to discuss this topic in more detail directly with the U.S. Government.

- Defense Services related to launch failure analysis intended to be captured by the revised definition of "Defense Services" (ITAR §120.9(a)(6)) should be limited to the launch vehicle itself. Activities independent of the launch vehicle (*e.g.*, activities related to a commercial satellite) should not be captured by this definition.

Thank you for considering Boeing's input. Please do not hesitate to contact me if you have any questions or need additional information. I can be reached at (314) 232-9527 or via e-mail at gregory.j.sloan@boeing.com.

Sincerely,

Gregory J. Sloan
Director, Global Trade Controls – Boeing Defense, Space & Security