

From: George Moynihan

To: Leann Nguyen

Date: March 31, 2017

Subject: Request for Info - File # 0113-EX-CN-2017

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Message:

Ms. Nguyen:

In reply to the inquiry dated March 21, 2017 (Ref. 36148), please note the following:

- Antenna - Radar

As a preliminary matter, BAE Systems wishes to clarify that the subject antenna is a radar. BAE Systems notes that its reply was "Yes" to the question "Is a directional antenna (other than radar) used", which may have caused some confusion to the Commission. Thus:

o If the FCC wishes for BAE Systems to change its reply to "No" for the above question, please advise.

o In light of the fact that the antenna is a radar, please advise if it is not necessary to provide any additional directionality/orientation information.

Notwithstanding the fact that the antenna is a radar, for the sake of completeness, BAE Systems reports as follows:

- "Antenna pointing ranges (azimuth and elevation)";

o For both locations, BAE Systems seeks the ability to point the beams from horizon to zenith (0 to +90 degrees), and in all azimuth directions (0 to 360 degrees). To the extent that there are any concerns with this approach, BAE Systems requests an opportunity to discuss/resolve any issues prior to any negative action being taken.

Additional Parameters:

Half Power beam widths; AZ 4 degree, EL 12 degree  
MAX Side Lobe Levels - all beams (Average) -15dB

- "All antenna patterns";

o Because the subject antenna is electronically steerable, it has over 2000 antenna pointing positions, with different patterns for each. BAE Systems assumes that the Commission does not require submission of each of these patterns – please advise if this assumption is incorrect. BAE Systems can report that there are certain representative patterns which reflect an elevation cut for 9 pointing directions (positions over +/- 40 degrees at 10 degree increments) and an azimuth cut for 13 pointing directions (positions over +/- 60 degrees at 10 degree increments). Please advise if this provides sufficient insight as to the antenna characteristics, or if additional information is required. If any additional information is required, BAE Systems asks that the Commission request such additional information prior to taking any negative action on the application.

This is also to confirm that the antenna characteristics and the test set-up will mitigate potential interference, as follows:

- Operation of the requested facilities will not be continuous. Rather, authority for only sporadic

operation of the facilities is requested during the authorized timeframe. The transmitter will issue intermittent transmissions of finite duration, which will significantly limit the potential for interference to authorized users. For the types of transmissions described above, the company estimates that the likely signal transmission usage for the device will be: 3 transmissions per day and 180 seconds per day, and the likely maximum continuous duration of a transmission would be 600s. In the off state, no measurable power will be radiated. In fact, there may be extended periods of non-operation during the authorized period, while other non-RF transmission aspects of the experiment are conducted.

Best regards,

Jeff Rummel  
Attorney for BAE Systems