To: Justin Foley
E-Mail: jfoley@calpoly.edu
From: Doug Young
Date: January 12, 2017

Subject: Request for Info - File #0042-EX-CN-2016

Message:

The FCC's International Bureau/Satellite Division requests responses to the following:

We reviewed the IARU frequency coordination letter and notice that the spacecraft emission of 7K86F1D was coordinated; however, the Form 442 has emissions that are almost 2 time larger (15K0F1D). Please verify the emission bandwidth if the values in the Form 442 are correct will the new emission bandwidth be coordinated with IARU?

Review of Form 442 and SpaceCap file:
As stated above, form 442 uplink and downlink emission designator is 15K0F1D which do not match with the IARU letter and API file emission of 7K86f1D.

In form 442, uplink section, we notice the question asking if a directional antenna is being used, the answer is NO which is not correct. Also the 3dB beamwidth was not provided.

In Form 442, uplink section, the transmit power value is 60W and 2334 W (ERP) was provided. The earth station antenna gain is giving as 18.9 dBi and our ERP calculation shows the following:

60W = 17.8 dBW and antenna gain of 18.9 dBi; so the total EIRP = (17.8+18.9) 36.7 dBW; converting EIRP to ERP (36.7 dBW - 2.15 dB = 34.55 dBW; then converting from dBW to W (34.55/10 = 3.455; raise to 10^3.455 = 2851 W); Our calculated ERP of 2851 W is greater than 2334 W; could the applicant please verify the ERP value and update the documents as appropriate.

In the SpaceCap file, UPLINK page, Group ID 1,
We notice that RR No. 4.4 (box C.2.c) was left blank; we will need the applicant to enter "Y."

In the SpaceCap file, DOWNLINK page, Group ID 2,
The minimum elevation angle box is blank (box B.2bis.b); please provide the minimum elevation angle (the minimum is typically 5 degrees).

We notice that RR No. 4.4 (box C.2.c) was left blank; we will need the applicant to enter "Y."

Please provide the antenna patterns for the SPACECRAAFT receive and transmit (reference in boxes B.3.c.1 co-polar antenna pattern diag # 2 and # 1).?

Please provide the antenna patterns for the EARTH STATION transmit and receive (reference in boxes C.10.d.5.a co-polar antenna pattern diag # 3 and # 4).

If it is the same antenna pattern for the uplink and downlink SPACECRAFT and for the uplink and downlink EARTH STATION, please indicate that in your email and reference the same number in both uplink and downlink SPACECRAFT and EARTH STATION.

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of January 12, 2017 may result in application dismissal pursuant to Section 5.67 and forfeiture of the filing fee pursuant to Section 1.1108.

DO NOT Reply to this email by using the 'Reply' button. In order for your response to be processed

expeditiously, you must upload your response via the Internet at https://apps.fcc.gov/oetcf/els/index.cfm by clicking on the "Reply to Correspondence" hyperlink.

Responses to this correspondence must contain the Reference number : 35340