

Eleanor Lott

From: Suzanne Hutchings Malloy [suzanne.h.malloy@ico.com]
Sent: Tuesday, October 07, 2008 5:19 PM
To: Eleanor Lott
Cc: Harry Ng; Trang Nguyen
Subject: FW: New ICO amendment SES-AM-20080903-01137 E070290

Eleanor:

I hope you're doing well. I'm responding on behalf of ICO to the e-mail you sent to Dennis Schmitt, asking about the antenna elevation angle for our Ka band earth station modification application.

The discrepancy you identify in your e-mail below is due to the ICO-G satellite inclined angle of 6 degrees. In particular:

1. At +6 degrees inclined angle (e.g., at 6 degrees northern latitude):
Azimuth angle = 140.7 (141) degrees elevation angle = 47.7 (48) degrees
2. At 0 degree inclined angle (on the equatorial plane)
Azimuth angle = 145.5 (146) degrees elevation angle = 41.8 (42) degrees
3. At -6 degrees inclined angle (e.g., at 6 degrees southern latitude):
Azimuth angle = 149.1 (149) degrees elevation angle = 35.9 (36) degrees

The ICO-G satellite is operating at an inclined orbit, so that there are many combinations of elevation and azimuth angles at which the ICO MSS satellite operates. However, there is only one field each on Form 312-B in which to enter the elevation and azimuth angles (eastern limit/E57 & western limit/E59). It is therefore not possible to indicate the diurnal (daily) excursion of the satellite elevation angles or the azimuth angle. For example, the elevation angle diurnal excursion is between 35.9 degrees and 47.7 degrees. Similarly, the azimuth diurnal excursion is between 140.7 degrees and 149.1 degrees.

Hence, in the ICO Ka-band earth station antenna filing, ICO only identified one of the possible values. Specifically, ICO indicated the lowest elevation angle of 35.9 degrees and the nominal azimuth angle of 145.5 degrees. The 42 degree elevation angle calculated by the FCC staff relates to the 0 0 degree inclined angle (on the equatorial plane) for ICO-G satellite. This 42 degree elevation angle is within the range of the diurnal excursion of the satellite.

Please contact me if you have any further questions about this matter.

Suzanne

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From: Eleanor Lott [mailto:Eleanor.Lott@fcc.gov]
Sent: Thursday, October 02, 2008 3:37 PM

10/8/2008