



January 6, 2009

Federal Communications Commission
International Bureau
445 12th Street, S.W.
Washington, D.C. 20554

Re: Supplemental Engineering Certification of Intelsat

To Whom It May Concern:

This letter supplements the certification letter dated June 5, 2008 ("June 5th Letter") previously provided in connection with the application of Row 44, Inc. ("Row 44") for authority to operate, on a non-conforming, non-harmful-interference basis, transmit/receive antennas for aeronautical mobile-satellite services ("AMSS") using fixed-satellite service ("FSS") frequencies in the Ku-band, including capacity on Intelsat's Horizons 1 satellites at 127° W.L. In the June 5th Letter, Intelsat noted that the AeroSat antenna to be used by Row 44 "operates under gimballed motor control to orient the antenna in azimuth, elevation and polarization and achieves a ± 0.2 degree pointing accuracy during active tracking of the intended satellite." June 5th Letter at 1. This letter provides a supplemental certification that the conclusions contained in the June 5th Letter regarding this aspect of Row 44's proposed operations continue to be valid.

In particular, Intelsat, SES Americom and EchoStar, which all operate Ku-band FSS geostationary satellite operators within six degrees of 127° W.L., are familiar both with the techniques and details concerning antenna pointing, alignment and transmission shut-off that Row 44 has described to the Commission in connection with its application,¹ and with the analysis thereof provided by ViaSat, Inc.² We have reviewed the antenna control mechanisms outlined by Row 44, and agree that, under the conditions described

¹ See FCC File No. SES-LIC-20080508-00570 -- Row 44 Opposition to ViaSat, Inc.'s Petition to Deny (July 23, 2008); Opposition of Row 44, Inc. to Supplement to Petition to Deny (October 23, 2008); Row 44 *Ex Parte* Letter (November 26, 2008).

² See FCC File No. SES-LIC-20080508-00570 -- Petition to Deny of ViaSat, Inc. (June 27, 2008); Reply of ViaSat, Inc. (August 7, 2008); ViaSat *Ex Parte* Letter (October 2, 2008); Supplement to Petition to Deny of ViaSat, Inc. (October 10, 2008); Reply to Opposition to Supplement of ViaSat, Inc. (November 4, 2008); ViaSat *Ex Parte* Letter (November 10, 2008); ViaSat *Ex Parte* Letter (December 8, 2008).



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by Row 44, the proposed antenna will operate in compliance with the Commission's two-degree spacing requirements, including the pointing accuracy and shutdown requirements of Section 25.222(a) of the Commission's Rules that apply to mobile Earth stations on vessels. See 47 C.F.R. § 25.222(a). The foregoing determination notwithstanding, SES Americom believes that it is appropriate for the FCC to authorize Row 44's proposed STA operation on an interim basis, allowing an opportunity to evaluate actual operational data obtained to verify performance. Row 44 shall share test data with Intelsat, SES and Echostar so that a determination can be made on the efficacy of the Row 44 system to resolve adjacent satellite interference issues.

Row 44 has affirmed that the operating envelope is predicted forward, such that almost any possible transmission that would potentially occur outside the envelope will actually be detected before it occurs, prompting a shut down of transmission before the envelope is exceeded. Row 44 has stated that the worst-case scenario would be where the aircraft is at the edge of the envelope and accelerates outside of the envelope just after the inertial reference unit sends the current position. In the event of an instantaneous jump in acceleration from 0 to 30 deg/sec², Row 44 reports that the transmission shutdown would occur within 0.02 degrees of the envelope boundary, and that this would result in no harmful interference to adjacent satellites.

Intelsat, SES Americom and EchoStar also note that, pursuant to the amendment filed August 19, 2008 (FCC File No. SES-AMD-20080819-01074), the original Row 44 proposal has been modified slightly, such that Row 44 will operate its antenna with a reduced maximum EIRP of 38.6 dBW. Row 44 has affirmed that the AeroSat antenna will operate in the 14.05-14.47 GHz band with a maximum EIRP density of 14.6 dBW in any 4 kHz band of the uplink spectrum.

Sincerely,

A handwritten signature in blue ink that reads "Jose Albuquerque".

Jose Albuquerque
Senior Director, Spectrum Engineering
Intelsat

Acceptance by Row 44, Inc.:



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Row 44 affirms that the information provided to Intelsat and reflected in the June 5th Letter and this supplement are true and accurate to the best of Row 44's knowledge, information and belief, and that it shall comply with all relevant Intelsat coordination agreements, as provided herein.

A handwritten signature in black ink, appearing to read "John Guidon".

John Guidon
President & CEO
Row 44, Inc.

Acceptance by SES Americom, Inc.

SES Americom, Inc. agrees to operation of the above antenna with the technical parameters described herein and in the June 5th Letter with respect to its AMC-21 satellite at 125° W.L., which operates within six degrees of Intelsat's Horizons 1 satellite at 127° W.L.

A handwritten signature in black ink, appearing to read "Krish Jonnalagadda".

Krish Jonnalagadda
Satellite Marketing Development, Manager
SES Americom, Inc.

Acceptance by Echostar Corporation:

Echostar Corporation agrees to operation of the above antenna with the technical parameters described herein and in the June 5th Letter with respect to its Echostar 9 satellite at 121° W.L., which operates within six degrees of Intelsat's Horizons 1 satellite at 127° W.L.

A handwritten signature in black ink, appearing to read "David Bair".

David Bair
Senior Vice President
Space Programs and Operations
Echostar Satellite Corporation