

Engineering Statement

PanAmSat Licensee Corp. ("PanAmSat") filed on May 25, 2006 an application for an earth station authorization for a proposed earth station in Phillipsburg, Pennsylvania (see FCC Filing No.: SES-LIC-INTR2006-01383). PanAmSat provides herein additional technical information which demonstrates that the proposed station filing would comply with the provision of section 25.220(c)(1) of the Commission rules.

In SES-LIC-INTR2006-01383, PanAmSat proposed to employ a 2.4 meter transmit/receive earth station antenna in Phillipsburg, Pennsylvania. The earth station would transmit on the frequency band of 5925 – 6425 MHz and receive on the frequency band 3700 – 4200 MHz. The maximum gain of the proposed antenna in the 5925 – 6425 MHz band is 42 dBi and in the 3700 – 4200 MHz band is 38 dBi. In its filing, PanAmSat proposed to transmit digital carriers on 5925 – 6425 MHz with a maximum EIRP density of 27.96 dBW/4 kHz. PanAmSat also provided graphical plots showing the gain of the antenna versus the off-axis angle. These graphs are provided again in Exhibits 1 and 2, which show the gain performance of the antenna within $\pm 4.5^\circ$ and $\pm 45^\circ$ of the beam's main gain lobe, respectively. Also shown in this Exhibit are the maximum antenna gain values as specified in section 25.209(a)(1) of the Commission's Rules.

As evident from Exhibits 1 and 2, the proposed antenna does not comply with the antenna performance standards contained in section 25.209(a)(1). Accordingly, the provisions of section 25.220 of the Rules are applicable. Under this section of the rules, the applicant must reduce the power and power density levels that result by reducing the values stated in sections 25.134, 25.211 or 25.212 of the FCC Rules, whichever is applicable, by the number of decibels that the non-compliant antenna fails to meet the antenna performance standard of 25.209(a) and (b). Given that PanAmSat proposes to transmit narrow-band and wide-band digital carriers, the EIRP density limits associated with routine licensing of earth stations as contained in sections 25.212 are applicable. Under section 25.212, a transmitting earth station must limit the power density of its digital carriers to no more than - 2.7 dBW/4kHz.

From Exhibits 1 and 2, it is noted that the proposed 2.4 meter antenna exceeds the antenna gain performance standards of section 25.209(a)(1) by 6 dB, i.e. the maximum value by which the earth station antenna gain exceeds

the antenna gain in 25.209(a)(1) is 6 dB. This excess occurs at the off-axis angle of -1° , relative to the beam peak, whereby the gain of the antenna is 35 dBi and the maximum permissible gain as specified in section 25.209(a)(1) is 29 dBi.

The maximum EIRP density of the digital carriers proposed by PanAmSat in SES-LIC-INTR2006-01383 is 27.96 dBW/4kHz which corresponds to a maximum power density level of $(27.96 \text{ dBW/4kHz} - 42 \text{ dBi}) = -14.04 \text{ dBW/4kHz}$. At an off-axis angle of -1° the maximum EIRP density of the proposed carriers do not exceed $(-14.04 \text{ dBW/4kHz} + 35 \text{ dBi}) = 20.96 \text{ dBW/4kHz}$. Combining the maximum permissible power density level of -2.7 dBW/4kHz , from section 25.212 of the Rules, and the maximum permissible antenna gain of 29 dBi from section 25.209(a)(1), the maximum permissible EIRP density of any digital carrier must not exceed $(-2.7 \text{ dBW/4kHz} + 29 \text{ dBi}) = 26.3 \text{ dBW/4kHz}$ at an off-axis angle of $\pm 1^\circ$. Accordingly, the carriers that are to be transmitted through the proposed earth station would comply with the Commission's limits and would allow the Commission to routinely license the proposed earth station.

Certification Statement

I hereby certify that I am a technically qualified person and am familiar with Part 25 of the Commission's Rules and Regulations. The contents of this engineering statement were prepared by me or under my direct supervision and to the best of my knowledge are complete and accurate.

/s/ Abdolmajid Khalilzadeh

Abdolmajid Khalilzadeh
PanAmSat Corporation
Senior Manager, Asset Engineering

June 9, 2006

Date

Exhibit 1: Off-Axis Gain Performance of The Proposed 2.4m Antenna

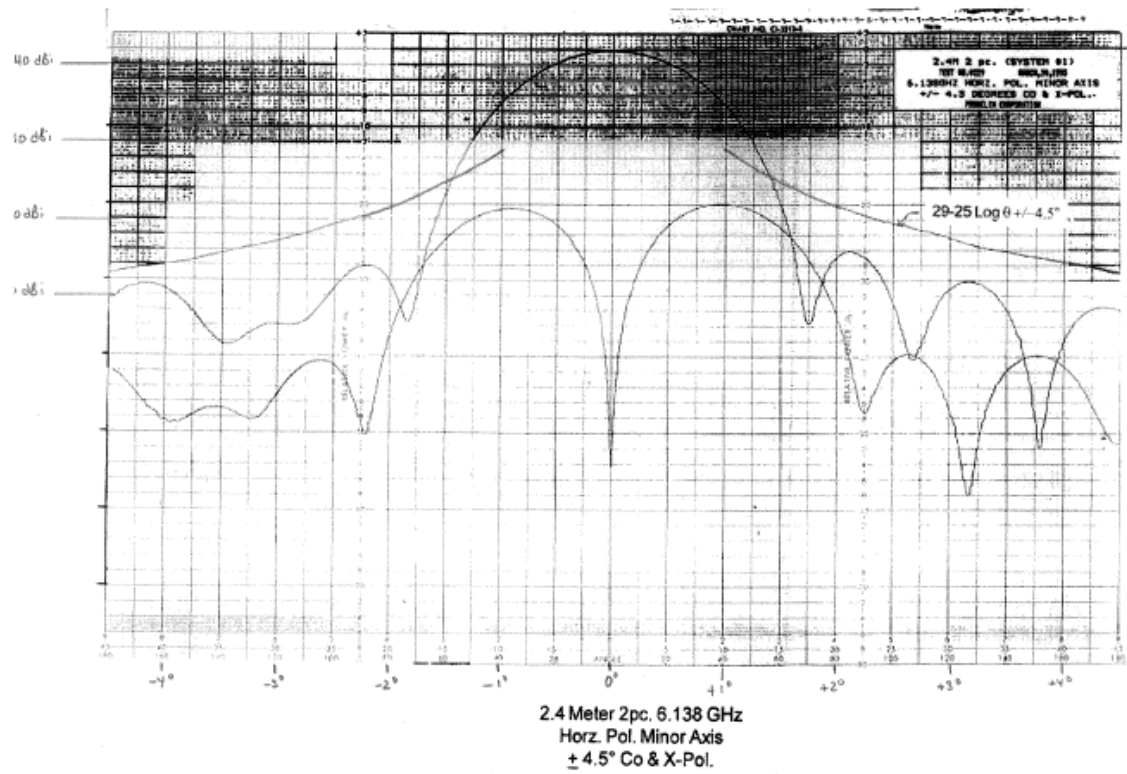


Exhibit 2: Expanded Off-Axis Gain Performance of The Proposed 2.4m Antenna

