

**Non-Compliant Antenna Waiver Request**

**Form 312, Schedule B, Question E15**

Re: 2.4 Meter Fixed Earth Station  
Fixed Satellite Service  
C-Band 5925 – 6425 MHz and 3700 – 4200 MHz

This antenna is a Prodelin Corporation 1251, 2.4 meter antenna and it does not strictly comply with 25.209 of the FCC Rules and Regulations.

In the Part 25 Earth Station Fifth Report and Order, the Federal Communications Commission (Commission) adopted streamlined procedures for reviewing non-routine earth station license applications. As part of that Report and Order, the Commission directed the International Bureau to create a list of approved non-routine earth station antennas to be posted on the Commission's website. The Commission concluded that a website listing approved non-routine antennas, including antenna gain patterns and the conditions placed on the use of each antenna, would help applicants in preparing applications for non-routine earth station licenses and expedite review of these applications.

Earth station applicants proposing to use an antenna that is on this list will no longer need to attach antenna radiation plots as an exhibit to their applications, as required by Section 25.132(b)(3) of the Commission's rules. They need only provide an attachment to their applications citing the particular non-routine earth station antenna they plan to use, and an application file number and call sign of a license in which that type of non-routine antenna has been approved.

The application file number and call sign, SES-LIC-20080717-00949 and E080170 of a previously licensed Prodelin Corporation 1251, 2.4 meter earth station, indicates that the 2.4 meter antenna proposed in this application will operate without conflict.

The licensee of Call Sign E080170 limited their satellite arc to a single orbital position at 186° West Longitude, and also limited their transmit power density to -10.0 dBw/4 kHz (EIRP Density of 32.0 dBW/4 kHz).

The maximum input spectral power density into the antenna for the proposed 2.4 meter Prodelin Corporation antenna in this application, will not exceed -11.3 dBW/4 kHz (EIRP Density of 30.7 dBW/4 kHz). This application also limits the satellite arc to only one satellite and a single orbital position of 24.5° West Longitude. The antenna gain for the applicant's earth station toward the 24.5° position is 18.1 dB lower than the filed antenna gain included with the E080170 filing. This difference in antenna gains toward

**Response to Form 312, Schedule B, Question E15 (Continued)**

the desired satellites is due to the differences in the elevation angles. The elevation angle of the applicant's earth station toward the 24.5° West position is 20.2°, while the elevation angle for the E080170 filing was 8.8° toward the 186° West position. This difference in antenna gains toward the desired satellites indicates that the applicant's filing is an additional 18 dB lower than the above noted SES-LIC-20080717-00949 filing.

The applicant agrees to accept any adjacent satellite interference in the 4 GHz receive band as a result of the performance of the antenna in the 1° to 1.5° region. The applicant understands that no adjacent satellite interference protection will be available in the 1° to 1.5° regions. The applicant understands that adjacent satellite interference protection applies only to the extent of the criteria set forth in §25.209. Should the use of this antenna cause interference to other systems; the applicant agrees to terminate transmission upon notice from the Commission.

Per §25.115(h)(4) the earth station applicant certifies that it will limit its pointing error to 0.5.

In this case, the antenna exceeds the patterns of §25.209 in the 1° to 1.7° region measured at the low, mid, and high frequency bands. The Max RF transmit power density at the Antenna Flange is -11.3 dBW/4KHz. This figure is below the maximum allowed RF transmit power density of -2.7 dBW/4KHz by a margin of 8.6 dB.

**Summary**

The antenna noted in this application exceeds the CFR 25.209 sidelobe specification for the sidelobe envelope in the 1° to 1.7° region. Outside the main beam, the antenna meets the requirements of 25.209.

The application file number (SES-LIC-20080717-00949) and call sign, (E080170), of a previously licensed Prodelin 1251, 2.4 meter earth station, indicates that the 2.4 meter antenna proposed in this application will operate without conflict.

The power density restrictions specified by the FCC for small diameter antennas utilizing digital traffic at C-Band is -2.7 dBW/4 kHz. This antenna will operate at a maximum transmit power density of -11.3 dBW/4 kHz.

If the use of this antenna should cause interference to other systems, the applicant will terminate such transmissions immediately upon notice from the FCC or offended parties.