Earth Station Licensing, International Bureau
Federal Communications Commission

To: The Commission

Boeing hereby applies for a Special Temporary Authorization (STA) from the Federal Communications Commission (FCC) to transmit and receive using a 96 cm diameter remote antenna, designated REMOTE1A. REMOTE1A will communicate with a 12/14 GHz VSAT Network, call sign E990016, using the AMC-6 satellite located in the 72 degrees W orbital slot. The purpose of the STA is to allow Boeing to operationally test an antenna of type REMOTE1A integrated within a transportable wireless communications system. Boeing seeks an STA to operate a temporary fixed earth station using an antenna of type REMOTE1A throughout the continental United States (CONUS). Boeing seeks an STA for a period of 180 days, commencing March 28, 2003, or, as soon as authorization is granted. Authorization is sought for four temporary fixed earth stations whose antennas will be mounted on land vehicles. The operational contact persons will be Dzung Phan at 714-896-5077 or 562-310-1546 and Stephen Lubman at 714-896-5053.

The antenna and signal parameters are given in attachment 1.

The REMOTE1A antenna conforms to the antenna gain requirements of 47 CFR Section 25.209, for angles 1.8 degrees and greater. The antenna patterns are given in attachment 2. Attachment 2 shows the co- and cross-polarization antenna patterns at 14.25 GHz in the horizontal plane, the co- and cross-polarization patterns at 14.25 GHz in the vertical plane, the co- and cross-polarization patterns at 11.95 GHz in the vertical plane, and the co- and cross-polarization patterns at 11.95 GHz in the horizontal plane. An EIRP density analysis, given in attachment 3, shows that this antenna will transmit a maximum EIRP density that is less than that allowed for an antenna conforming to 47 CFR Section 25.209 that radiates at the EIRP density of -14 dBW/4 kHz that is allowed in 47 CFR Section 25.134(a)(1), with an exception for off-axis angles between 1.25 degrees and 1.35 degrees. At off-axis angles between 1.25 and 1.35 degrees, the REMOTE1A type antenna will radiate up to 0.16 dB above the level allowed for a conforming antenna. Boeing believes no harmful interference to an adjacent satellite will occur however, since there are no Ku-band FSS satellites operating at 1.25 to 1.35 degrees away from the 72 degrees West orbital slot.

A radio frequency (RF) hazard analysis is given in attachment 4.

A statement on relevant FAA requirements is given in attachment 5.

Boeing requests that the Commission expedite this request so that Boeing may commence testing immediately.

Sincerely yours,

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The Boeing Company

ATTACHMENT 1A

Antenna Type: REMOTE1A

Quantity: 4

Manufacturer: AvL Technologies

Model: 960

Antenna Size: 96 cm diameter

Antenna Gain: 41.2 dBi at 14.25 GHz

Antenna Gain: 39.7 dBi at 11.95 GHz

Antenna Height above Ground Level: 1.8 to 5 meters

Total Input Power at Antenna Flange: 4 W

Total EIRP: 47.2 dBW

Satellite Location: 72 degrees West longitude

Maximum Antenna Elevation Angle Limit: 10 deg

Maximum EIRP Density toward Horizon: -10 dBW/4 kHz

ATTACHMENT 1B

Antenna	Fq. Band	Transmit or Receive	Polari-zation	Emission Designa-tor	Max. EIRP per Carrier (dBW)	Max. EIRP Density per Carrier (dBW/ 4 kHz)	Modula-tion and Services
REMOTE1 A	140000-145000 MHz	Transmit	Vertical	2M00G7W	47.2 dBW	20.2	QPSK, data
REMOTE1 A	11700-12200 MHz	Receive	Horizontal	2M00G7W	------	------	QPSK, data