

Exhibit B

Compliance with FCC Report & Order (FCC 96-377) for the 13.75 - 14.0 GHz Band Analysis and Calculations

1. Background

This Exhibit is presented to demonstrate the extent to which the Intelsat License LLC satellite earth station in Castle Rock, CO is in compliance with FCC Report & Order 96-377. The potential interference from the earth station to U.S. Navy shipboard radiolocation operations (RADAR) and the NASA space research activities in the 13.75 - 14.0 GHz band is addressed in this exhibit. The parameters for the earth station are:

Table 1. Earth Station Characteristics

- Coordinates (NAD83): 39° 16' 38.0" N, 104° 48' 25.0" W
- Satellite Location for Earth Station: OPTUS-D10 at 33.0° W to 177.0° W
- Frequency Band: 13.75-14.5 GHz for uplink
- Polarizations: Circular
- Emissions: 850KF2D
- Modulation: FM
- Maximum Aggregate Uplink EIRP: 92.0 dBW for all Carriers
- Transmit Antenna Characteristics
 - Antenna Size: 12.5 meter in Diameter
 - Antenna Type/Model: NEC
 - Gain: 64.0 dBi
- RF power into Antenna Flange: 28.0 dBW or -0.7 dBW/ MHz
or -2.3 dBW/4 kHz (Maximum)
- Minimum Elevation Angle:
Castle Rock, Co. 5.3° @ 101.8° Az. at 33.0 W
5.0° @ 258.5° Az. at 177.0 W.
- Side Lobe Antenna Gain: $32 - 25 \cdot \log(\theta)$

Because the above uplink spectrum is shared with the Federal Government, coordination in this band requires resolution data pertaining to potential interference between the earth stations and both Navy Department and NASA systems. Potential interference from the earth station could impact the Navy and/or NASA systems in two areas. These areas are noted in FCC Order 96-377 and consist of (1) Radiolocation and radio navigation, (2) Data Relay Satellites.

Summary of Coordination Issues:

- 1) Potential Impact to Government Radiolocation (Shipboard Radar)
- 2) Potential Impact to NASA Tracking and Data Relay Satellite Systems (TDRSS)

2. Potential Impact to Government Radiolocation (Shipboard Radar)

Radiolocation operations (RADAR) may occur anywhere in the 13.4 - 14 GHz frequency band aboard ocean going United States Navy ships. The FCC Order 96-377 allocates the top 250 MHz of this 600 MHz band to the Fixed Satellite Service (FSS) on a co-primary basis with the radiolocation operations and provides for an interference protection level of $-167 \text{ dBW/m}^2/4 \text{ kHz}$.

The closest distance to the shoreline from the Castle Rock, CO earth station is approximately 1350 km southwest toward the Pacific Ocean.

Therefore, there should be no interference to the U.S. Navy RADAR from the Castle Rock, CO earth station due to distance and terrain blockage between the site and the shore.

3. Potential Impact to NASA's Tracking and Data Relay Satellite System (TDRSS)

The geographic location of the earth station in Castle Rock, CO is outside the 390 km radius coordination contour surrounding NASA's White Sands, New Mexico ground station complex. Therefore, the TDRSS space-to-earth link will not be impacted by the earth station in Castle Rock, CO.

The transmissions from the earth station in Castle Rock, CO will not overlap with the 13.75-13.8 GHz band. Therefore, the TDRSS forward space-to-space link (TDRSS forward link-to-LEO) will not be impacted by the earth station in Castle Rock, CO.

4. Coordination Result Summary and Conclusions

The results of the analysis and calculations performed in this exhibit indicate that compatible operation between the Castle Rock, CO earth station and the U.S. Navy and NASA systems in the 13.75 - 14.0 GHz band is possible. These analyses have been based on the assumption of 850

kHz bandwidth carriers. No interference to U.S. Navy RADAR operations, TDRSS space-to-earth link, or TDRSS space-to-space link will occur from the Castle Rock, CO earth station.