Exhibit A

Intelsat License LLC
Riverside, California

Vertex/RSI 9 Meter Earth Station

1. Background

This Exhibit is presented to demonstrate the extent to which the Intelsat License LLC ("Intelsat") satellite earth station in Riverside, California is in compliance with the Federal Communications Commision ("FCC") Report and Order 96-377. The potential inteference from the earth station to U.S. Navy shipboard radiolocation operations ("RADAR") and the National Aeronautics and Space Administration ("NASA") space research activities in the 13.75-14.0 GHz band is addressed in this exhibit. The parameters for the earth station are:

Coordinates (NAD83):	33° 47' 47.3" N, 117° 5' 15" W
Satellite Arc Range for Earth Station:	Intelsat 5 at 45°W to 190°W
Frequency Band:	13.75-14.00 GHz
Polarizations:	Linear & Circular
Emissions:	850KF7D
Modulation:	FM/BPSK/NRZ-L
Maximum Aggregate Uplink EIRP:	76dBW for all Carriers
Transmit Antenna Characteristics	
Antenna Size:	9 Meters in Diameter
Anenna Type/Model:	Vertex/RSI
Gain:	60.1 dBi
RF Power into Antenna Flange:	15.9 dBW or -7.4 dBW/4kHz
Minimum Elevation Angle:	5.47° @ 260.3° Azimuth
	6.16° @ 100.19° Azimuth
Side Lobe Antenna Gain	FCC Reference Pattern

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 U.S. Navy Department and NASA systems. Potential intefference from the earth station could impact the U.S. Navy and/or NASA systems in two areas. These areas are noted in GCC Report and Order 96-377 dated September 1996, and consist of (1) Radiolocation and Radio Navigation, (2) Data Relay Satellites.

Summary of Coordination Issues:

a.) Potential Impact to Government Radiolocation (Shipboard Radar)
b.) 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 13.4-14.0 GHz frequency band aboard ocean-going U.S. Navy ships. FCC order 96-377 allocates the top 250MHz 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 dBW/m^2/4kHz.

The closest distance to the shoreline from Riverside, California earth station is approximately 63 km southwest toward the Pacific Ocean. The calculation of the power spectral density at this distance is given by:

1. Clear Sky EIRP: 76 dBW
2. Carrier Bandwidth: 850 kHz
3. PD at antenna input: -7.4 dBW/4kHz
4. Transmit Antenna Gain: 60.1 dBi
5. Antenna Gain to Horizon: 10.6 dBi
6. Antenna Elevation Angles: 5.5˚ @ 260.3˚ azimuth
   6.2˚ @ 100.2˚ azimuth

The earth station will radiate interference toward the ocean according to its off-axis side-lobe performance. A conservative analysis, using FCC standard reference pattern, results in an off-axis antenna gain of 10.6 towards the Pacific Ocean.

The signal density at the shoreline, through free space is:

PFD = Antenna Feed Power density (dBW/4kHz) + Antenna Off-Axis Gain (dBi) - Spread Loss (dBW/m^2)

= -7.4dBW/4kHz + 10.6dBi - (10*log[4*PI*[63km]^2))

= -103.8 dBW/m/4kHz - Additional Path Losses (63.4 dB)

Our calculation indicate additional path loss of approximately 63.4 dB including absorbation loss and earth diffraction loss for the actual path profiles from the earth station to the nearest shoreline.

The calculated PFD, including additional path losses to the closest shoreline, is -167.2dbW/ m^2/4 kHz. This is 0.2dB below the -167.0 dBW/ m^2/4 kHz interference criteria of the R&O 96-377. Therefore, there should be no interference to the U.S. Navy RADAR from the Riverside, California earth station due to the distance and the terrain blockage between the site and the shore.

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

The geographic location of the Intelsat earth station in Riverside, California 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 Intelsat earth station in Riverside, California.

The TDRSS space-to-space link in the 13.772 to 13.778 GHz band is assumed to be protected if an earth station produces and EIRP of less than 71 dBW/6MHz in this band. The 9 meter earth station antenna will not transmit in this band. Therefore, there will be no potential interference to the TDRSS space-to-space link.

4. Coordination Result Summary and Conclusions

The results of the analysis and calculation performed in this exhibit indicate that compatible operation between the earth station at the Riverside, California facility and U.S. Navy and NASA TDRSS space-to-earth and space-to-space links are possible. No interference to U.S. Navy RADAR or NASA TDRSS operations from the Riverside, California site earth station should occur.

Exhibit B

Intelsat License LLC
Riverside, California

Vertex/RSI 9 Meter Earth Station

1. Background

This Exhibit is presented to demonstrate the extent to which the Intelsat License LLC ("Intelsat") satellite earth station in Riverside, California is in compliance with the Federal Communications Commision ("FCC") Report and Order 96-377. The potential inteference from the earth station to U.S. Navy shipboard radiolocation operations ("RADAR") and the National Aeronautics and Space Administration ("NASA") space research activities in the 13.75-14.0 GHz band is addressed in this exhibit. The parameters for the earth station are:

Coordinates (NAD83):	33° 47' 47.3" N, 117° 5' 15" W
Satellite Arc Range for Earth Station:	Intelsat 5 at 45°W to 185°W
Frequency Band:	13.75-14.00 GHz
Polarizations:	Linear & Circular
Emissions:	850KF7D
Modulation:	FM/BPSK/NRZ-L
Maximum Aggregate Uplink EIRP:	82dBW for all Carriers
Transmit Antenna Characteristics	
Antenna Size:	9 Meters in Diameter
Anenna Type/Model:	Vertex/RSI
Gain:	60.1 dBi
RF Power into Antenna Flange:	21.9 dBW or -1.4 dBW/4kHz
Minimum Elevation Angle:	9.63° @ 257.28° Azimuth
	6.16° @ 100.19° Azimuth
Side Lobe Antenna Gain	FCC Reference Pattern

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 U.S. Navy Department and NASA systems. Potential intefference from the earth station could impact the U.S. Navy and/or NASA systems in two areas. These areas are noted in GCC Report and Order 96-377 dated September 1996, and consist of (1) Radiolocation and Radio Navigation, (2) Data Relay Satellites.

Summary of Coordination Issues:

a.) Potential Impact to Government Radiolocation (Shipboard Radar)
b.) 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 13.4-14.0 GHz frequency band aboard ocean-going U.S. Navy ships. FCC order 96-377 allocates the top 250MHz 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 dBW/m^2/4kHz.

The closest distance to the shoreline from Riverside, California earth station is approximately 63 km southwest toward the Pacific Ocean. The calculation of the power spectral density at this distance is given by:

1. Clear Sky EIRP: 82 dBW
2. Carrier Bandwidth: 850 kHz
3. PD at antenna input: -1.4 dBW/4kHz
4. Transmit Antenna Gain: 60.1 dBi
5. Antenna Gain to Horizon: 4.4 dBi
6. Antenna Elevation Angles: 9.6˚ @ 257.3˚ azimuth
   6.2˚ @ 100.2˚ azimuth

The earth station will radiate interference toward the ocean according to its off-axis side-lobe performance. A conservative analysis, using FCC standard reference pattern, results in an off-axis antenna gain of 4.4 towards the Pacific Ocean.

The signal density at the shoreline, through free space is:

PFD = Antenna Feed Power density (dBW/4kHz) + Antenna Off-Axis Gain (dBi) - Spread Loss (dBW/m^2)

= -1.4dBW/4kHz + 4.4dBi - (10*log[4*PI*[63km]^2))

= -103.9 dBW/m/4kHz - Additional Path Losses (63.4 dB)

Our calculation indicate additional path loss of approximately 63.4 dB including absorbation loss and earth diffraction loss for the actual path profiles from the earth station to the nearest shoreline.

The calculated PFD, including additional path losses to the closest shoreline, is -167.3dbW/ m^2/4 kHz. This is 0.3dB below the -167.0 dBW/ m^2/4 kHz interference criteria of the R&O 96-377. Therefore, there should be no interference to the U.S. Navy RADAR from the Riverside, California earth station due to the distance and the terrain blockage between the site and the shore.

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

The geographic location of the Intelsat earth station in Riverside, California 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 Intelsat earth station in Riverside, California.

The TDRSS space-to-space link in the 13.772 to 13.778 GHz band is assumed to be protected if an earth station produces and EIRP of less than 71 dBW/6MHz in this band. The 9 meter earth station antenna will not transmit in this band. Therefore, there will be no potential interference to the TDRSS space-to-space link.

4. Coordination Result Summary and Conclusions

The results of the analysis and calculation performed in this exhibit indicate that compatible operation between the earth station at the Riverside, California facility and U.S. Navy and NASA TDRSS space-to-earth and space-to-space links are possible. No interference to U.S. Navy RADAR or NASA TDRSS operations from the Riverside, California site earth station should occur.

Exhibit C

Intelsat License LLC
Riverside, California

Vertex/RSI 9 Meter Earth Station

1. Background

This Exhibit is presented to demonstrate the extent to which the Intelsat License LLC ("Intelsat") satellite earth station in Riverside, California is in compliance with the Federal Communications Commision ("FCC") Report and Order 96-377. The potential inteference from the earth station to U.S. Navy shipboard radiolocation operations ("RADAR") and the National Aeronautics and Space Administration ("NASA") space research activities in the 13.75-14.0 GHz band is addressed in this exhibit. The parameters for the earth station are:

Coordinates (NAD83):	33° 47' 47.3" N, 117° 5' 15" W
Satellite Arc Range for Earth Station:	Intelsat 5 at 45°W to 180°W
Frequency Band:	13.75-14.00 GHz
Polarizations:	Linear & Circular
Emissions:	850KF7D
Modulation:	FM/BPSK/NRZ-L
Maximum Aggregate Uplink EIRP:	86dBW for all Carriers
Transmit Antenna Characteristics	
Antenna Size:	9 Meters in Diameter
Anenna Type/Model:	Vertex/RSI
Gain:	60.1 dBi
RF Power into Antenna Flange:	25.9 dBW or 2.6 dBW/4kHz
Minimum Elevation Angle:	13.79° @ 254.12° Azimuth
	6.16° @ 100.19° Azimuth
Side Lobe Antenna Gain	FCC Reference Pattern

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 U.S. Navy Department and NASA systems. Potential intefference from the earth station could impact the U.S. Navy and/or NASA systems in two areas. These areas are noted in GCC Report and Order 96-377 dated September 1996, and consist of (1) Radiolocation and Radio Navigation, (2) Data Relay Satellites.

Summary of Coordination Issues:

a.) Potential Impact to Government Radiolocation (Shipboard Radar)
b.) 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 13.4-14.0 GHz frequency band aboard ocean-going U.S. Navy ships. FCC order 96-377 allocates the top 250MHz 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 dBW/m^2/4kHz.

The closest distance to the shoreline from Riverside, California earth station is approximately 63 km southwest toward the Pacific Ocean. The calculation of the power spectral density at this distance is given by:

1. Clear Sky EIRP: 86 dBW
2. Carrier Bandwidth: 850 kHz
3. PD at antenna input: 2.6 dBW/4kHz
4. Transmit Antenna Gain: 60.1 dBi
5. Antenna Gain to Horizon: 0.5 dBi
6. Antenna Elevation Angles: 13.8˚ @ 254.1˚ azimuth
   6.2˚ @ 100.2˚ azimuth

The earth station will radiate interference toward the ocean according to its off-axis side-lobe performance. A conservative analysis, using FCC standard reference pattern, results in an off-axis antenna gain of 0.5 towards the Pacific Ocean.

The signal density at the shoreline, through free space is:

PFD = Antenna Feed Power density (dBW/4kHz) + Antenna Off-Axis Gain (dBi) - Spread Loss (dBW/m^2)

= 2.6dBW/4kHz + 0.5dBi - (10*log[4*PI*[63km]^2))

= -103.8 dBW/m/4kHz - Additional Path Losses (63.4 dB)

Our calculation indicate additional path loss of approximately 63.4 dB including absorbation loss and earth diffraction loss for the actual path profiles from the earth station to the nearest shoreline.

The calculated PFD, including additional path losses to the closest shoreline, is -167.2dbW/ m^2/4 kHz. This is 0.2dB below the -167.0 dBW/ m^2/4 kHz interference criteria of the R&O 96-377. Therefore, there should be no interference to the U.S. Navy RADAR from the Riverside, California earth station due to the distance and the terrain blockage between the site and the shore.

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

The geographic location of the Intelsat earth station in Riverside, California 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 Intelsat earth station in Riverside, California.

The TDRSS space-to-space link in the 13.772 to 13.778 GHz band is assumed to be protected if an earth station produces and EIRP of less than 71 dBW/6MHz in this band. The 9 meter earth station antenna will not transmit in this band. Therefore, there will be no potential interference to the TDRSS space-to-space link.

4. Coordination Result Summary and Conclusions

The results of the analysis and calculation performed in this exhibit indicate that compatible operation between the earth station at the Riverside, California facility and U.S. Navy and NASA TDRSS space-to-earth and space-to-space links are possible. No interference to U.S. Navy RADAR or NASA TDRSS operations from the Riverside, California site earth station should occur.

Exhibit D

Intelsat License LLC
Riverside, California

Vertex/RSI 9 Meter Earth Station

1. Background

This Exhibit is presented to demonstrate the extent to which the Intelsat License LLC ("Intelsat") satellite earth station in Riverside, California is in compliance with the Federal Communications Commision ("FCC") Report and Order 96-377. The potential inteference from the earth station to U.S. Navy shipboard radiolocation operations ("RADAR") and the National Aeronautics and Space Administration ("NASA") space research activities in the 13.75-14.0 GHz band is addressed in this exhibit. The parameters for the earth station are:

Coordinates (NAD83):	33° 47' 47.3" N, 117° 5' 15" W
Satellite Arc Range for Earth Station:	Intelsat 5 at 45°W to 175°W
Frequency Band:	13.75-14.00 GHz
Polarizations:	Linear & Circular
Emissions:	850KF7D
Modulation:	FM/BPSK/NRZ-L
Maximum Aggregate Uplink EIRP:	88dBW for all Carriers
Transmit Antenna Characteristics	
Antenna Size:	9 Meters in Diameter
Anenna Type/Model:	Vertex/RSI
Gain:	60.1 dBi
RF Power into Antenna Flange:	27.9 dBW or 4.6 dBW/4kHz
Minimum Elevation Angle:	17.92° @ 250.77° Azimuth
	6.16° @ 100.19° Azimuth
Side Lobe Antenna Gain	FCC Reference Pattern

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 U.S. Navy Department and NASA systems. Potential intefference from the earth station could impact the U.S. Navy and/or NASA systems in two areas. These areas are noted in GCC Report and Order 96-377 dated September 1996, and consist of (1) Radiolocation and Radio Navigation, (2) Data Relay Satellites.

Summary of Coordination Issues:

a.) Potential Impact to Government Radiolocation (Shipboard Radar)
b.) 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 13.4-14.0 GHz frequency band aboard ocean-going U.S. Navy ships. FCC order 96-377 allocates the top 250MHz 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 dBW/m^2/4kHz.

The closest distance to the shoreline from Riverside, California earth station is approximately 63 km southwest toward the Pacific Ocean. The calculation of the power spectral density at this distance is given by:

1. Clear Sky EIRP: 88 dBW
2. Carrier Bandwidth: 850 kHz
3. PD at antenna input: 4.6 dBW/4kHz
4. Transmit Antenna Gain: 60.1 dBi
5. Antenna Gain to Horizon: -2.3 dBi
6. Antenna Elevation Angles: 17.9˚ @ 250.8˚ azimuth
   6.2˚ @ 100.2˚ azimuth

The earth station will radiate interference toward the ocean according to its off-axis side-lobe performance. A conservative analysis, using FCC standard reference pattern, results in an off-axis antenna gain of -2.3 towards the Pacific Ocean.

The signal density at the shoreline, through free space is:

PFD = Antenna Feed Power density (dBW/4kHz) + Antenna Off-Axis Gain (dBi) - Spread Loss (dBW/m^2)

= 4.6dBW/4kHz + -2.3dBi - (10*log[4*PI*[63km]^2))

= -104.7 dBW/m/4kHz - Additional Path Losses (63.4 dB)

Our calculation indicate additional path loss of approximately 63.4 dB including absorbation loss and earth diffraction loss for the actual path profiles from the earth station to the nearest shoreline.

The calculated PFD, including additional path losses to the closest shoreline, is -168.1dbW/ m^2/4 kHz. This is 1.1dB below the -167.0 dBW/ m^2/4 kHz interference criteria of the R&O 96-377. Therefore, there should be no interference to the U.S. Navy RADAR from the Riverside, California earth station due to the distance and the terrain blockage between the site and the shore.

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

The geographic location of the Intelsat earth station in Riverside, California 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 Intelsat earth station in Riverside, California.

The TDRSS space-to-space link in the 13.772 to 13.778 GHz band is assumed to be protected if an earth station produces and EIRP of less than 71 dBW/6MHz in this band. The 9 meter earth station antenna will not transmit in this band. Therefore, there will be no potential interference to the TDRSS space-to-space link.

4. Coordination Result Summary and Conclusions

The results of the analysis and calculation performed in this exhibit indicate that compatible operation between the earth station at the Riverside, California facility and U.S. Navy and NASA TDRSS space-to-earth and space-to-space links are possible. No interference to U.S. Navy RADAR or NASA TDRSS operations from the Riverside, California site earth station should occur.