Exhibit C

Exhibit C – Analysis of Non-Ionizing Radiation

1.0 Analysis for the KA30 earth station.

The analysis and calculations performed in this Annex comply with the methods described in the FCC Office of Engineering and Technology Bulletin, No. 65 first published in 1985 and revised in 1997 in Edition 97-01.

Bulletin No. 65 and the FCC R&O 96-326 specify two Maximum Permissible Exposure (MPE) limits that are dependent on the situation in which the exposure takes place and/or the status of the individuals who are subject to the exposure. These are described below:

- General Population/Uncontrolled environment MPE limit is 1 mW/cm^2. The General Population / Uncontrolled MPE is a function of transmit frequency and is for an exposure period of thirty minutes or less.

- Occupational/Controlled environment MPE limit is 5 mW/cm^2. The Occupational MPE is a function of transmit frequency and is for an exposure period of six minutes or less.

The analysis provided in this report determined the power flux density levels of the earth station in the 1) far-field, 2) near-field, 3) transition region, 4) region between the feed and main reflector surface, 5) at the main reflector surface, and 6) between the antenna edge and the ground.

Section 1 – Calculations for KA30

Input Parameter	Value	Units
Antenna Diameter	0.3048	m
Antenna Transmit Gain	37.43	dBi
Transmit Frequency	30000	MHz
Antenna Feed Flange Diameter	1.07	cm
Power Input to the Antenna	8.2	Watts

Calculated Parameter	Value	Units
Antenna Surface Area	0.0730	m^2
Area of Antenna Flange	0.8992	cm^2
Antenna Efficiency	0.6035	real
Gain Factor	5533.5011	real
Wavelength	0.0100	m

Calculated Parameter	Value	Units
Near-Field Distance	2.322576	m
Distance to Far-Field	5.5741824	m
Distance of Transition Range	2.322576	m

Calculated Parameter	Value	Units
Power Density in the Near Field	27.1308	mW/cm²
Power Density in the Far Field	11.6213	mW/cm²
Power Density in the Transition Region	27.1308	mW/cm²
Power Density at the Feed Flange	36477.8485	mW/cm²
Power Density at Main Reflector	44.9538	mW/cm²
Power Density between Reflector and Ground	11.2385	mW/cm²

Distance to 1 mW/cm² Power Density	19	m
Distance to 5 mW/cm² Power Density	8.5	m

Section A.2 – Summary of Results

Region	Distance (m)	Calculated Power Density (mW/cm^2)	Limit Controlled Environment ≤ 5 mW/cm^2	Limit Uncontrolled Environment ≤ 1 mW/cm^2
Safe Range for Uncontrolled	≥ 19	1.0	meets limit	meets limit
Safe Range for Controlled	≥ 8.5	5.0	meets limit	exceeds limit
Near Field	2.3	29.1	exceeds limit	exceeds limit
Far Field	5.6	11.6	exceeds limit	exceeds limit
Transition Region	2.3	27.1	exceeds limit	exceeds limit
Feed Flange	N/A	36478	exceeds limit	exceeds limit
Main Reflector	N/A	45	exceeds limit	exceeds limit

The KA30 terminals proposed in this application are for commercial and government uses on aircraft and intended to be operated only by professional personnel. As summarized in the above table the KA30 antenna does not meet the FCC's MPE levels for controlled or uncontrolled environments until separation distances of 19 m and 8.5 m respectively. However, given that the antenna will not operate below elevation angles of five degrees, that its mounting location on the fuselage of the aircraft, that is approximately ten meters above the ground and that the terminal will be pointed upward toward the satellite - persons on the ground near the aircraft are unlikely to be exposed to the main beam of the antenna. As with any directional antenna the maximum level of non-ionizing radiation is in the main beam of the antenna that is pointed to the satellite, therefore the levels of power density will be significantly reduced from those calculated. In addition, the antenna will be enclosed within a radome during operation. Therefore, the feed flange and main reflector, where the levels are highest, will not be physically accessible. When maintenance of the antenna is required, the trained technicians will turn off the transmit power before removing the radome and performing maintenance activities. Training of personnel with access to the antenna will include consideration of the operation mode of the antenna and information on how to prevent radiation exposure, including disabling the communications system. In conclusion, the results show that the KA30 antenna, in a controlled environment, and under the proper mitigation procedures, meets the guidelines specified in § 1.1310 of the Regulations.