Date: November 27th, 2007 **Exhibit 1**

RADIATION HAZARD STUDY

ENGINEERING STATEMENT CONCERNING THE APPLICATION OF PACIFIC SATELLITE CONNECTION, INC. FOR A NEW LICESNE FOR A TRANSMIT/RECEIVE **C-BAND** TEMPORARY FIXED EARTH STATION

1 - INTRODUCTION

This study has been performed by Pacific Satellite Connection to estimate the potential radiation hazard that could exist in the vicinity of a receive/transmit 3/6 GHz temporary fixed earth station which employs a 4.5 meter antenna model ESA45AAPT-1

OST Bulletin 65 specifies a maximum exposure level over a 6 minute period of an average power level of 5 mW/cm^2. This study examines the near-field, far-field and transition zones as well as the edge of the main reflector. These are the areas that are most likely to present a hazard to the general public.

The occasion of this study is the remitance of emission designators for full and half transponder analog video and digital QPSK, 8PKS modulation MPEG-2 and HD transmissions for a newly acquired antenna.

The amplification system consists of (2) two ETM 450-watts high power amplifiers. For redundancy purposes, the system will be operated in phase combine mode at all times. Power levels are nominal based on ETM test data and actual measurments.

2 - POWER LEVELS:

Nominal output of one HPA at flange:	**26 dBW (400 W)**
Nominal output of two HPA's at flange -- Phase combined:	**29 dBW (800 W)**
Line loss from Power Amp(s) to Feedhorn flange:	**1.25 dB**

Maximum power level at antenna input flange:

Phase combined:	**29 dBW (800 W)**
Antenna gain at 6.25 GHz:	**46.5 dBi**
Antenna diatemeter:	**4.5 Meters**
Maximum EIRP:	**74.25 dBW**

3 - NEAR FIELD CALCULATIONS:

The near-field or Fresnel region is defined by the equation: **Rnf=D^2/4(L)**

Where:

Rnf = extent of near-field	**Rnf =**	**105.47**	Meter
D = antenna diameter	**Provided**	**4.5**	Meter
L = Wavelengh (at 6 Ghz)	**Provided**	**0.048**	Meter

The maximum power density in the near-field is defined by: **Snf=16NP/Pi(D^2)**

Where:

Snf = maximum near-field density	**Provided:**	**16**	**Constant**
N = Aperature efficiency (.68) -- 68% average	**Enter:**	68	% average
P = Power at antenna input flange	**Enter:**	800	Watts
D = antenna diameter	**Provided:**	**4.5**	Meter

Snf = **136.9** Watt/meter^2

or

This is above the maximum allowable level of 5 mW/cm^2 ------->------->--------> **13.7** mW/cm^2

4 - FAR FIELD CALCULATIONS:

The distance to the beginning of the far-field is given by: **Rff=0.6(D^2)/L**

Where:

Rff = distance to the beginning of the far-field	**Provided:**	**0.6**	**Constant**
D = antenna diameter	**Provided:**	**4.5**	Meter
L = wavelength	**Provided:**	**0.048**	Meter

Rff= 253.1 Meters

The power field power density is given by: **Sff=PG/4Pi(R^2)**

where:

Sff = on-axis power density			
P = Power at the input flange phase combined	**Provided:**	**800**	
G = antenna gain (dBi)	**Enter:**	**46.5**	dBi
R = distance of interest here (Rff)	**Provided:**	**253.1**	Meters

Sff = 44.41 W/M^2

or

This is below the maximum allowable level of 5 mW/cm^2 -------->------->---------> 4.4 mW/cm^2

5 - Transition Zone:

For analysis purposes the maximum power density of the near-field is calculated and this value is assumed for every location in the transition zone.

The value calculated above (Snf) **13.7 mW/cm^2. This is well above the maximum level of 5 mW/cm^2.**
The power density at the beginning of the far-field calculated above (Sff) = 4.4 mW/cm^2 .
is below the maximum allowable level of 5.0 mW/cm^2.

Power density in the near field decreases inversely with the distance; power density in the far field decreases inversely with the square of the distance. Power density in the transition zone between the near and the far fields decreases with not-quite the square of the distance.

Power density in the transition zone is given by: **St=(SnfXRnf)/Rd**

Where:

St = Power density in transition zone			
Snf = Near-field density (calculated above)	**Provided:**	**136.9**	W/M^2
Rnf = Extent of near field (calculated above)	**Provided:**	**105.47**	Meters
Rd = Distance to point of interest (in the transition zone)	**Provided:**	**126.55**	Meters

A distance of : **126.55** meters is used for Rd in this case which is about the midpoint of the transition zone

St = **114.1** Watts/meter^2

or

This is above the maximum allowable level of 5 mW/cm^2 --------->-------->------> **11.4** mW/cm^2

6 - EDGE OF PRIMARY REFLECTOR:

Power density at the edge of the primary reflector, assuming even distribution is given by: **W = P/A**

Where:

P = Power at the input flange:	**Provided:**	**800**	Watts
A = Area of primary reflector	**Provided:**	**4.5**	Meters
	W =	**177.8**	Watts/m^2
		or	
This is above the limit of 5 mW/cm^2	-------->------->------->	**17.8**	mW/cm^2

7 - CONCLUSION:

All the values calculated above exceed the limit of 5 mW/cm^2 as would be expected for an. antenna this size.

	49.81	Watts/m^2
	5	mW/cm^2
The RPGL limit of 5 mW/cm^2 (main beam) will be met at a distance of >>>>>>>>>>>>>>	**239**	Meters

This was calculated by setting the distance in the far field equation (in section 4) so an outcome equal to 5 mW/cm^2 or 50 W/M^2 can be reached.

The antenna is mounted onto a transportable platform -- The center of the reflector will be approximately 12 feet above the ground when deployed.

In addition, the antenna is typically aimed at satellites greater than 15 degrees above the horizon. The solid volume encompassing the near-field and far-field will be above the area where the general public will be (on the ground) during transmissions.

The personnel operating the dish are instructed as to the hazard that exists and to stay away from the direction of the transmissions. They will be provided with a copy of this study.

This study was prepared on November 27th, 2007. It follows OST 65 guidelines.

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