E110150 SES-STA-20111024-01257 IB2011004666
Global Crossing Americas Solutions, Inc.

Approved by OMB
3060–0678

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATIONEnter a description of this application to identify it on the main menu:
STA Request for Arecibo, Puerto Rico Transmit Receive Earth Station

1. Applicant

Name:	Global Crossing Americas Solutions, Inc.	**Phone Number:**	305–808–5934
DBA Name:		**Fax Number:**	
Street:	701 Waterford Way	**E–Mail:**	paul.kouroupas@globalcrossing.com
	Suite 390		
City:	Miami	**State:**	FL
Country:	USA	**Zipcode:**	33126 –
Attention:	Mr Paul Kouroupas		

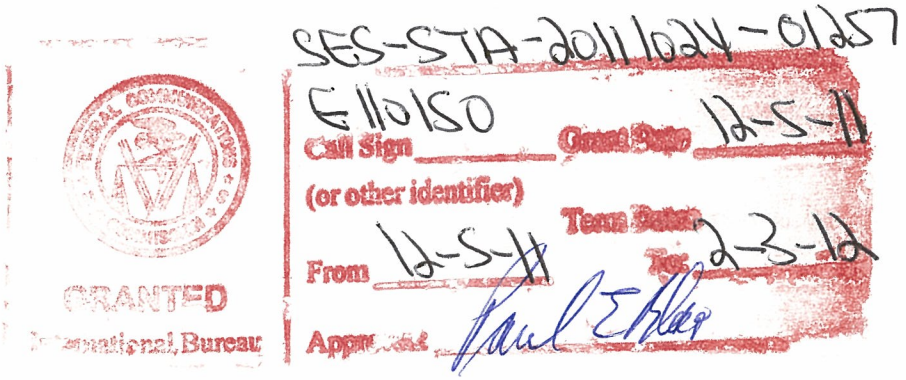
GRANTED
International Bureau

SES-STA-20111024-01257
E110150
Call Sign _____ Grant Date 12-5-11
(or other identifier)
From 12-5-11 Through 12-3-12
Approved [signature]

GLOBAL CROSSING AMERICAS SOLUTIONS, INC.
SES-STA-20111024-01257
E110150

CONDITIONS:

All operations shall be on an unprotected and non-harmful interference basis, i.e. the applicant shall not cause harmful interference to, and shall not claim protection from, interference caused to it by any other lawfully operating station and it shall cease transmission(s) immediately upon notice of such interference.



2. Contact

Name:	Global Crossing Americas Solutions, Inc.	**Phone Number:**	305-808-5934
Company:		**Fax Number:**	
Street:	701 Waterford Way	E-Mail:	paul.kouroupas@globalcrossing.com
	Suite 390		
City:	Miami	**State:**	FL
Country:	USA	**Zipcode:**	33126 -
Attention:		**Relationship:**	

(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)
3. Reference File Number SESLIC2011102101245 or Submission ID

4a. Is a fee submitted with this application?
◉ If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R.Section 1.1114).
○ Governmental Entity ○ Noncommercial educational licensee
○ Other(please explain):

4b. Fee Classification CGX – Fixed Satellite Transmit/Receive Earth Station

5. Type Request

◉ Use Prior to Grant ○ Change Station Location ○ Other

6. Requested Use Prior Date
11/01/2011

7. CityArecibo	8. Latitude (dd mm ss.s h) 18 28 37.8 N
9. State PR	10. Longitude (dd mm ss.s h) 66 45 16.3 W

11. Please supply any need attachments.

Attachment 1: Exhibit A Attachment 2: Exhibit B Attachment 3: Exhibit C

12. Description. (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

Global Crossing Americas Solutions, Inc. seeks a Special Temporary Authority for their Arecibo, Puerto Rico transmit/receive earth station. The STA is being sought to provide back-up links to critical banking applications at branches of a Puerto Rico bank. The back-ups are to be implemented as an alternate route in case the primary terrestrial links

13. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti–Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes.

(●) Yes ( ) No

14. Name of Person Signing Oscar Luna	15. Title of Person Signing Vice President Network Operations

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

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THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104–13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

12. Description

Global Crossing Americas Solutions, Inc. seeks a Special Temporary Authority for their Arecibo, Puerto Rico transmit/receive earth station. The STA is being sought to provide back-up links to critical banking applications at branches of a Puerto Rico bank. The back-ups are to be implemented as an alternate route in case the primary terrestrial links are affected during extreme weather conditions. It is in the best interest of the public that the STA is being sought, to provide critical services during emergency situations.

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

Global Crossing Americas Solutions, Inc
Arecibo, Puerto Rico

Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Virginia 20147
October 13, 2011

TABLE OF CONTENTS

1. CONCLUSIONS

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the proposed earth station demonstrates that this site will operate satisfactorily with the common carrier microwave environment, based upon the restrictions noted in the Summary of Results (Section 2).

2. SUMMARY OF RESULTS

A number of great circle interference cases were identified during the interference study of the proposed earth station. Each of the cases, which exceeded the interference objective on a line-of-sight basis, was profiled and the propagation losses estimated using NBS TN101 (Revised) techniques. The losses were found to be sufficient to reduce the signal levels to acceptable magnitudes in most cases.

The following companies reported potential great circle interference conflicts that did not meet the objectives on a line-of-sight basis. When over-the-horizon losses and frequency separation are considered on the interfering paths, sufficient losses exist to negate harmful interference from occurring with the proposed transmit-receive earth station. Further, the transmit spectrum will be limited to frequencies 6094.0 to 6124.0 MHz, and 6382.0 to 6423.0 MHz.

Company

AT&T Mobility Puerto Rico
Neptuno Media

No other carriers reported potential interference cases.

3. SUPPLEMENTAL SHOWING

Pursuant to Part 25.203(c) of the FCC Rules and Regulations, the satellite earth station proposed in this application was coordinated by Comsearch using computer techniques and in accordance with Part 25 of the FCC Rules and Regulations.

Expedited coordination data for this earth station was sent to the below listed carriers with a letter dated July 22, 2011. An Information-Only letter reducing the transmit power was forwarded on October 6, 2011.

Company

ALL AMERICAN CABLE AND RADIO INC
AT&T Mobility Puerto Rico
AT&T Mobility Virgin Islands, Inc.
Aeronet Wireless Broadband Corp.
CROWN CASTLE INT CORP DE PUERTO RICO
EVERTEC, INC
INTERISLAND TELEPHONE CORPORATION
Iniciativa Tecnologica Centro Oriental
Interference Office, Arecibo Observatory
Neptuno Media
Orizon Wireless Corporation
PRWireless, Inc.
PUERTO RICO ELECTRIC POWER AUTHORITY
PUERTO RICO HIGHWAY AUTHORITY
Puerto Rico Commonwealth of State Police
Puerto Rico Telephone Company
Sprintcom, Inc. Puerto Rico
T-Mobile Puerto Rico LLC

4. EARTH STATION COORDINATION DATA

This section presents the data pertinent to frequency coordination of the proposed earth station that was circulated to all carriers within its coordination contours.

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 http://www.comsearch.com

Date:	10/13/2011
Job Number:	111006COMSGE01

Administrative Information

Status	ENGINEER PROPOSAL
Call Sign	
Licensee Code	GLOAME
Licensee Name	Global Crossing Americas Solutions, Inc

Site Information — ARECIBO, PR

Venue Name	MIRAMAR ARECIBO
Latitude (NAD 83)	18° 28' 37.8" N
Longitude (NAD 83)	66° 45' 16.3" W
Climate Zone	B
Rain Zone	1
Ground Elevation (AMSL)	16.15 m / 53.0 ft

Link Information

Satellite Type	Geostationary
Mode	TR - Transmit-Receive
Modulation	Digital
Satellite Arc	45° W to 56° West Longitude
Azimuth Range	128.5° to 149.1°
Corresponding Elevation Angles	57.0° / 65.1°
Antenna Centerline (AGL)	6.4 m / 21.0 ft

Antenna Information		Receive - FCC32		Transmit - FCC32	
Manufacturer		Prodelin		Prodelin	
Model		2.4 Meter		2.4 Meter	
Gain / Diameter		38.0 dBi / 2.4 m		42.0 dBi / 2.4 m	
3-dB / 15-dB Beamwidth		2.30° / 4.60°		1.50° / 3.00°	
Max Available RF Power	(dBW/4 kHz)			-17.6	
	(dBW/MHz)			6.4	
Maximum EIRP	(dBW/4 kHz)			24.4	
	(dBW/MHz)			48.4	
Interference Objectives:	Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
	Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%

Frequency Information	Receive 4.0 GHz	Transmit 6.1 GHz
Emission / Frequency Range (MHz)	230KG7D - 2M23G7D / 3700.0 - 4200.0	230KG7D - 1M30G7D / 6094.0 - 6124.0 230KG7D - 1M30G7D / 6382.0 - 6423.0
Max Great Circle Coordination Distance	412.2 km / 256.1 mi	132.9 km / 82.6 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi	100.0 km / 62.1 mi

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 http://www.comsearch.com

Coordination Values	**ARECIBO, PR**			
Licensee Name	Global Crossing Americas Solutions, Inc			
Latitude (NAD 83)	18° 28' 37.8" N			
Longitude (NAD 83)	66° 45' 16.3" W			
Ground Elevation (AMSL)	16.15 m / 53.0 ft			
Antenna Centerline (AGL)	6.4 m / 21.0 ft			
Antenna Model	Prodelin 2.4 meter			
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz	
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power			-17.6 (dBW/4 kHz)	

			Receive 4.0 GHz		Transmit 6.1 GHz	
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	109.78	-10.00	412.20	-10.00	132.91
5	0.00	107.46	-10.00	412.20	-10.00	132.91
10	0.00	105.03	-10.00	412.20	-10.00	132.91
15	0.00	102.51	-10.00	412.20	-10.00	132.91
20	0.00	99.92	-10.00	412.20	-10.00	132.91
25	0.00	97.28	-10.00	412.20	-10.00	132.91
30	0.00	94.59	-10.00	412.20	-10.00	132.91
35	0.00	91.88	-10.00	412.20	-10.00	132.91
40	0.00	89.16	-10.00	412.20	-10.00	132.91
45	0.00	86.45	-10.00	412.20	-10.00	132.91
50	0.00	83.75	-10.00	412.20	-10.00	132.91
55	0.00	81.09	-10.00	412.20	-10.00	132.91
60	0.00	78.47	-10.00	412.20	-10.00	132.91
65	0.00	75.93	-10.00	412.20	-10.00	132.91
70	0.00	73.46	-10.00	412.20	-10.00	132.91
75	0.00	71.10	-10.00	412.20	-10.00	132.91
80	0.00	68.85	-10.00	412.20	-10.00	132.91
85	0.00	66.73	-10.00	412.20	-10.00	132.91
90	0.00	64.78	-10.00	412.20	-10.00	132.91
95	0.00	63.00	-10.00	412.20	-10.00	132.91
100	0.00	61.42	-10.00	412.20	-10.00	132.91
105	0.00	60.05	-10.00	412.20	-10.00	132.91
110	0.94	58.05	-10.00	261.22	-10.00	100.00
115	0.94	57.14	-10.00	261.30	-10.00	100.00
120	1.47	55.98	-10.00	226.63	-10.00	100.00
125	1.89	55.21	-10.00	204.94	-10.00	100.00
130	1.98	55.07	-10.00	200.48	-10.00	100.00
135	2.20	55.09	-10.00	191.83	-10.00	100.00
140	2.53	55.33	-10.00	180.15	-10.00	100.00
145	3.07	55.67	-10.00	162.62	-10.00	100.00
150	3.88	56.09	-10.00	143.00	-10.00	100.00
155	3.52	57.86	-10.00	151.23	-10.00	100.00
160	3.56	59.52	-10.00	150.24	-10.00	100.00
165	3.56	61.43	-10.00	150.26	-10.00	100.00
170	3.59	63.37	-10.00	149.84	-10.00	100.00
175	3.19	64.91	-10.00	159.39	-10.00	100.00
180	2.81	66.46	-10.00	170.74	-10.00	100.00
185	2.81	67.85	-10.00	170.74	-10.00	100.00

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Antenna Model	Prodelin 2.4 meter			
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz	
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power			-17.6 (dBW/4 kHz)	

			Receive 4.0 GHz		Transmit 6.1 GHz	
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	2.81	69.41	-10.00	170.74	-10.00	100.00
195	2.75	71.15	-10.00	172.75	-10.00	100.00
200	2.73	72.99	-10.00	173.41	-10.00	100.00
205	2.73	74.92	-10.00	173.42	-10.00	100.00
210	2.73	76.96	-10.00	173.43	-10.00	100.00
215	2.12	79.31	-10.00	195.02	-10.00	100.00
220	2.38	81.38	-10.00	185.52	-10.00	100.00
225	2.85	83.49	-10.00	169.43	-10.00	100.00
230	2.81	85.79	-10.00	170.49	-10.00	100.00
235	2.71	88.11	-10.00	173.95	-10.00	100.00
240	2.55	90.43	-10.00	179.45	-10.00	100.00
245	3.15	92.79	-10.00	160.63	-10.00	100.00
250	2.88	95.08	-10.00	168.38	-10.00	100.00
255	2.23	97.20	-10.00	190.75	-10.00	100.00
260	1.44	99.13	-10.00	228.56	-10.00	100.00
265	1.06	101.05	-10.00	250.22	-10.00	100.00
270	0.95	102.97	-10.00	259.89	-10.00	100.00
275	0.95	104.85	-10.00	259.86	-10.00	100.00
280	0.70	106.47	-10.00	290.94	-10.00	100.00
285	0.49	107.97	-10.00	323.24	-10.00	108.46
290	0.00	109.11	-10.00	412.20	-10.00	132.91
295	0.00	110.44	-10.00	412.20	-10.00	132.91
300	0.28	111.86	-10.00	385.68	-10.00	124.91
305	0.20	112.83	-10.00	410.58	-10.00	132.41
310	0.00	113.49	-10.00	412.20	-10.00	132.91
315	0.00	114.14	-10.00	412.20	-10.00	132.91
320	0.00	114.61	-10.00	412.20	-10.00	132.91
325	0.00	114.87	-10.00	412.20	-10.00	132.91
330	0.00	114.94	-10.00	412.20	-10.00	132.91
335	0.00	114.80	-10.00	412.20	-10.00	132.91
340	0.00	114.46	-10.00	412.20	-10.00	132.91
345	0.00	113.92	-10.00	412.20	-10.00	132.91
350	0.00	113.19	-10.00	412.20	-10.00	132.91
355	0.00	111.98	-10.00	412.20	-10.00	132.91

5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Jeffrey E. Cowles

Jeffrey E. Cowles
Engineer III, Telecommunications
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Va. 20147

DATED: October 13, 2011

Analysis of Non-Ionizing Radiation for a 2.4-Meter Earth Station System

This report analyzes the non-ionizing radiation levels for a 2.4-meter earth station system. The analysis and calculations performed in this report 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. The radiation safety limits used in the analysis are in conformance with the FCC R&O 96-326. Bulletin No. 65 and the FCC R&O specifies that there are two separate tiers of exposure limits that are dependant on the situation in which the exposure takes place and/or the status of the individuals who are subject to the exposure. The Maximum Permissible Exposure (MPE) limits for persons in a General Population/Uncontrolled environment are shown in Table 1. The General Population/Uncontrolled MPE is a function of transmit frequency and is for an exposure period of thirty minutes or less. The MPE limits for persons in an Occupational/Controlled environment are shown in Table 2. The Occupational MPE is a function of transmit frequency and is for an exposure period of six minutes or less. The purpose of the analysis described in this report is to determine the power flux density levels of the earth station in the far-field, near-field, transition region, between the subreflector or feed and main reflector surface, at the main reflector surface, and between the antenna edge and the ground and to compare these levels to the specified MPEs.

Table 1. Limits for General Population/Uncontrolled Exposure (MPE)

Frequency Range (MHz)	Power Density (mW/cm^2)
30-300	0.2
300-1500	Frequency (MHz)*(0.8/1200)
1500-100,000	1.0

Table 2. Limits for Occupational/Controlled Exposure (MPE)

Frequency Range (MHz)	Power Density (mW/cm^2)
30-300	1.0
300-1500	Frequency (MHz)*(4.0/1200)
1500-100,000	5.0

Table 3. Formulas and Parameters Used for Determining Power Flux Densities

Parameter	Symbol	Formula	Value	Units
Antenna Diameter	D	Input	2.4	m
Antenna Surface Area	$A_{surface}$	$\pi D^2 / 4$	4.52	m^2
Feed Flange Diameter	D_{fa}	Input	19.0	cm
Area of Feed Flange	A_{fa}	$\pi D_{fa}{}^2/4$	283.53	cm^2
Frequency	F	Input	6175	MHz
Wavelength	λ	300 / F	0.048583	m
Transmit Power	P	Input	5.00	W
Antenna Gain (dBi)	G_{es}	Input	42.0	dBi
Antenna Gain (factor)	G	$10^{Ges/10}$	15848.9	n/a
Pi	π	Constant	3.1415927	n/a
Antenna Efficiency	η	$G\lambda^2/(\pi^2D^2)$	0.66	n/a

1. Far Field Distance Calculation

The distance to the beginning of the far field can be determined from the following equation:

Distance to the Far Field Region

$$R_{ff} = 0.60\ D^2 / \lambda \quad (1)$$
$$= 71.1\ m$$

The maximum main beam power density in the far field can be determined from the following equation:

On-Axis Power Density in the Far Field

$$S_{ff} = G\ P / (4\ \pi\ R_{ff}^2) \quad (2)$$
$$= 1.246\ W/m^2$$
$$= 0.125\ mW/cm^2$$

2. Near Field Calculation

Power flux density is considered to be at a maximum value throughout the entire length of the defined Near Field region. The region is contained within a cylindrical volume having the same diameter as the antenna. Past the boundary of the Near Field region, the power density from the antenna decreases linearly with respect to increasing distance.

The distance to the end of the Near Field can be determined from the following equation:

Extent of the Near Field

$$R_{nf} = D^2 / (4\ \lambda) \quad (3)$$
$$= 29.6\ m$$

The maximum power density in the Near Field can be determined from the following equation:

Near Field Power Density

$$S_{nf} = 16.0\ \eta\ P / (\pi\ D^2) \quad (4)$$
$$= 2.909\ W/m^2$$
$$= 0.291\ mW/cm^2$$

3. Transition Region Calculation

The Transition region is located between the Near and Far Field regions. The power density begins to decrease linearly with increasing distance in the Transition region. While the power density decreases inversely with distance in the Transition region, the power density decreases inversely with the square of the distance in the Far Field region. The maximum power density in the Transition region will not exceed that calculated for the Near Field region. The power density calculated in Section 1 is the highest power density the antenna can produce in any of the regions away from the antenna. The power density at a distance R_t can be determined from the following equation:

Transition Region Power Density

$$S_t = S_{nf}\ R_{nf} / R_t \quad (5)$$
$$= 0.291\ mW/cm^2$$

4. Region between the Feed Assembly and the Antenna Reflector

Transmissions from the feed assembly are directed toward the antenna reflector surface, and are confined within a conical shape defined by the type of feed assembly. The most common feed assemblies are waveguide flanges, horns or subreflectors. The energy between the feed assembly and reflector surface can be calculated by determining the power density at the feed assembly surface. This can be determined from the following equation:

Power Density at the Feed Flange

$$S_{fa} = 4000\ P / A_{fa} = 70.540\ mW/cm^2 \quad (6)$$

5. Main Reflector Region

The power density in the main reflector is determined in the same manner as the power density at the feed assembly. The area is now the area of the reflector aperture and can be determined from the following equation:

Power Density at the Reflector Surface

$$S_{surface} = 4\ P / A_{surface} = 4.421\ W/m^2 = 0.442\ mW/cm^2 \quad (7)$$

6. Region between the Reflector and the Ground

Assuming uniform illumination of the reflector surface, the power density between the antenna and the ground can be determined from the following equation:

Power Density between Reflector and Ground

$$S_g = P / A_{surface} = 1.105\ W/m^2 = 0.111\ mW/cm^2 \quad (8)$$

7. Summary of Calculations

Table 4. Summary of Expected Radiation levels for Uncontrolled Environment

Region		Calculated Maximum Radiation Power Density Level (mW/cm^2)	Hazard Assessment
1. Far Field (R_{ff} = 71.1 m)	S_{ff}	0.125	Satisfies FCC MPE
2. Near Field (R_{nf} = 29.6 m)	S_{nf}	0.291	Satisfies FCC MPE
3. Transition Region ($R_{nf} < R_t < R_{ff}$)	S_t	0.291	Satisfies FCC MPE
4. Between Feed Assembly and Antenna Reflector	S_{fa}	70.540	Potential Hazard
5. Main Reflector	$S_{surface}$	0.442	Satisfies FCC MPE
6. Between Reflector and Ground	S_g	0.111	Satisfies FCC MPE

Table 5. Summary of Expected Radiation levels for Controlled Environment

Region		Calculated Maximum Radiation Power Density Level (mW/cm^2)	Hazard Assessment
1. Far Field (R_{ff} = 71.1 m)	S_{ff}	0.125	Satisfies FCC MPE
2. Near Field (R_{nf} = 29.6 m)	S_{nf}	0.291	Satisfies FCC MPE
3. Transition Region ($R_{nf} < R_t < R_{ff}$)	S_t	0.291	Satisfies FCC MPE
4. Between Feed Assembly and Antenna Reflector	S_{fa}	70.540	Potential Hazard
5. Main Reflector	$S_{surface}$	0.442	Satisfies FCC MPE
6. Between Reflector and Ground	S_g	0.111	Satisfies FCC MPE

It is the applicant's responsibility to ensure that the public and operational personnel are not exposed to harmful levels of radiation.

8. Conclusions

Based on the above analysis it is concluded that harmful levels of radiation will not exist in regions normally occupied by the public or the earth station's operating personnel. The transmitter will be turned off during antenna maintenance so that the FCC MPE of 5.0 mW/cm2 will be complied with for those regions with close proximity to the reflector that exceed acceptable levels.

Radiation Hazard Report

The applicant agrees to abide by the conditions specified in Condition 5208 provided below:

Condition 5208 - The licensee shall take all necessary measures to ensure that the antenna does not create potential exposure of humans to radiofrequency radiation in excess of the FCC exposure limits defined in 47 CFR 1.1307(b) and 1.1310 wherever such exposures might occur. Measures must be taken to ensure compliance with limits for both occupational/controlled exposure and for general population/uncontrolled exposure, as defined in these rule sections. Compliance can be accomplished in most cases by appropriate restrictions such as fencing. Requirements for restrictions can be determined by predictions based on calculations, modeling or by field measurements. The FCC's OET Bulletin 65 (available on-line at www.fcc.gov/oet/rfsafety) provides information on predicting exposure levels and on methods for ensuring compliance, including the use of warning and alerting signs and protective equipment for worker.

OWNERSHIP INFORMATION

(1) Name, address, citizenship, and primary business of the controlling entity and any intermediate subsidiaries or parties.

Global Crossing Americas Solutions, Inc. ("GCAS") is owned and controlled by Level 3 Communications, Inc. ("Level 3 Parent"), through a series of intermediate holding companies:

Impsat Fiber Networks, Inc.
Address: Elvira Rawson de Dellepiane, 150 Piso 8, C1107 BCA, Buenos Aires, Argentina
Citizenship: Delaware
Principal Business: holding company
Relationship: owns 100 percent of GCAS

GC Impsat Holdings II Ltd.
Address: 10 Fleet Place, 7th Floor, London EC4M 7RB, England
Citizenship: United Kingdom
Principal Business: holding company
Relationship: owns 100 percent of Impsat Fiber Networks, Inc.

GC Impsat Holdings I Ltd.
Address: 10 Fleet Place, 7th Floor, London EC4M 7RB, England
Citizenship: United Kingdom
Principal Business: holding company
Relationship: owns 100 percent of GC Impsat Holdings II Ltd.

GC Impsat Holdings Nederlands B.V.
Address: 10 Fleet Place, 7th Floor, London EC4M 7RB, England
Citizenship: Netherlands
Principal Business: holding company
Relationship: owns 100 percent of GC Impsat Holdings I Plc

Global Crossing Holdings Limited ("GCHL")
Address: Wessex House, 45 Reid Street, Hamilton HM12, Bermuda
Citizenship: Bermuda
Principal Business: holding company
Relationship: owns 100 percent of GC Impsat Holdings Nederlands B.V.

Level 3 GC Limited
Address: Wessex House, 45 Reid Street, Hamilton HM12, Bermuda
Citizenship: Bermuda
Principal Business: holding company

Relationship: owns 100 percent of GCHL

Level 3 Financing, Inc.
Address: 1025 Eldorado Blvd., Broomfield, Colorado 80021
Citizenship: USA
Principal Business: telecommunications
Relationship: owns 100 percent of Level 3 GC Limited

Level 3 Communications, Inc. ("Level 3 Parent")
Address: 1025 Eldorado Blvd., Broomfield, Colorado 80021
Citizenship: USA
Principal Business: telecommunications
Relationship: owns 100 percent of Level 3 Financing, Inc.

(2) Name, address, citizenship, and the percentage of voting and equity stock of foreign entities holding 10 percent or more of the controlling corporation's voting stock.

STT Crossing Ltd ("STT Crossing")
Address: 10 Frere Felix de Valois Street, Port Louis, Mauritius
Citizenship: Mauritius
Principal Business: holding company
Relationship: owns approximately 24.33 percent of Level 3 Parent

STT Communications Ltd ("STT Communications")
Address: 51 Cuppage Road #09-01, StarHub Centre, Singapore 229469
Citizenship: Singapore
Principal Business: information communications
Relationship: owns 100 percent of STT Crossing

Singapore Technologies Telemedia Pte Ltd ("ST Telemedia")
Address: 51 Cuppage Road #09-01, StarHub Centre, Singapore 229469
Citizenship: Singapore
Principal Business: investment holding company
Relationship: owns 100 percent of STT Communications

Temasek Holdings (Private) Limited ("Temasek")
Address: 60B Orchard Road #06-18, The Atrium@Orchard, Singapore 238891
Citizenship: Singapore
Principal Business: investment holding company
Relationship: owns 100 percent of ST Telemedia

Temasek is wholly owned by the Government of Singapore through the Minister for Finance.