

Approved by OMB
3060-0678

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:
Request for Expedited 30-Day STA to Use 9m C-band Antenna at Hagerstown, MD Teleport

1. Applicant

Name:	Intelsat License LLC	Phone Number:	703-559-7848
DBA Name:		Fax Number:	703-559-8539
Street:	c/o Intelsat US LLC 7900 Tysons One Place	E-Mail:	susan.crandall@intelsat.com
City:	McLean	State:	VA
Country:	USA	Zipcode:	22102 -5972
Attention:	Susan H Crandall		



File # SES-STA-20180914-02700

Call Sign N/A Grant Date 9/17/2018
(or other identifier)

Term Dates
From 9/17/2018 To: 10/16/2018

Approved: Paul E. Blain

All operations authorized on a non-interference and non-protected basis. Applicant must comply with self imposed safety conditions noted in its Radiation Hazard Report (Exhibit B)
PEB

2. Contact	
Name: Cynthia J. Grady	Phone Number: 202-559-6949
Company: Intelsat US LLC	Fax Number: 703-559-8539
Street: 7900 Tysons One Place	E-Mail: cynthia.grady@intelsat.com
City: McLean	State: VA
Country: USA	Zipcode: 22102 -
Attention:	Relationship: Legal Counsel
(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 or Submission ID	
4a. Is a fee submitted with this application?	
<input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114). <input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee <input type="radio"/> Other (please explain):	
4b. Fee Classification CGX – Fixed Satellite Transmit/Receive Earth Station	
5. Type Request	
<input type="radio"/> Use Prior to Grant <input type="radio"/> Change Station Location <input checked="" type="radio"/> Other	
6. Requested Use Prior Date	
7. City Hagerstown	8. Latitude (dd mm ss.s h) 39 35 56.8 N

9. State MD	10. Longitude (dd mm ss.s h) 77 45 23.0 W
11. Please supply any need attachments. Attachment 1: STA Request Attachment 2: Exhibit A Attachment 3: Exhibit B	
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.) <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">Intelsat License LLC requests an expedited grant of Special Temporary Authority for 30 days, beginning September 15, 2018, to utilize a 9-meter C-band antenna located at its Hagerstown, Maryland teleport for antenna testing and to provide communications services to/from the SES-3 satellite (S2892) at 103.0 W.L.</div>	
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. <input checked="" type="radio"/> Yes <input type="radio"/> No	
14. Name of Person Signing Cynthia J. Grady	15. Title of Person Signing Regulatory Counsel, Intelsat US LLC
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).	

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

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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.



September 11, 2018

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Request for Special Temporary Authority to Operate a 9-meter C-band Antenna at
Intelsat's Hagerstown, Maryland Teleport
EXPEDITED TREATMENT REQUESTED

Dear Ms. Dortch:

Intelsat License LLC ("Intelsat") herein requests an expedited grant of Special Temporary Authority ("STA")¹ for 30 days, beginning September 15, 2018, to allow Intelsat to utilize a 9-meter C-band antenna located at its Hagerstown, Maryland teleport for antenna testing and to provide communications services to/from the SES-3 satellite (call sign S2892) at 103.0° W.L. Intelsat expects to begin providing service to/from SES-3 on or about October 1, 2018 for the duration of approximately one year.

Intelsat is simultaneously filing a request for 180 days of STA to communicate with SES-3.

The proposed communication services will be performed in the 5925-6425 MHz (uplink) and 3700-4200 MHz (downlink) bands.

In further support of this request, Intelsat herewith attaches Exhibits A and B, which contain technical information that demonstrates that the operation of the earth station will be compatible with its electromagnetic environment and will not cause harmful interference into any lawfully operating terrestrial facility, as well as a radiation hazard analysis report. In the extremely unlikely event that harmful interference should occur due to transmissions to or from its earth station, Intelsat will take all reasonable steps to eliminate the interference.

Intelsat is requesting expedited processing to accommodate testing of the antenna prior its needed in-service date. Grant of this expedited STA request services the public interest by enabling Intelsat to provide continuity of service to customers at the nominal 103.0° W.L. location.

¹ Intelsat has filed its STA request, an FCC Form 159, a \$200.00 filing fee, and this supporting letter electronically via the International Bureau's Filing System ("IBFS").

Ms. Marlene H. Dortch
September 11, 2018
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Please direct any questions regarding this STA request to the undersigned at (703) 559-6949.

Respectfully submitted,

/s/ Cynthia J. Grady

Cynthia J. Grady
Regulatory Counsel
Intelsat US LLC

cc: Paul Blais

Exhibit A

Prepared By

COMSEARCH

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

Prepared For

Intelsat License LLC Hagerstown, Maryland

Temporary Transmit-Only Earth Station
Operation Dates: 10/01/2018 - 04/01/2019

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. Verbal and written coordination was conducted with the below listed carriers on August 17, 2018.

Company

AT&T Corp.
Adams County Department of Emergency Svc
Affiniti PA, LLC
Appalachia Engineering Services
Argos Engineering, LLC
Atlantic Broadband (Penn), LLC
Baltimore County of Maryland
Baltimore Gas and Electric Company
Bedford County of
Believe Wireless, LLC
Blair County 911
CBS Radio of Maryland, LLC
Capital Communications of America
Carroll, County of
Cellco Partnership-WDC/Baltimore
Commonwealth of Pennsylvania-Radio Proj.
Comprehensive Wireless LLC
County of Culpeper
County of Frederick
County of York
Dauphin County Emergency Management
ECW Wireless, LLC
Eastern MLG LLC
Enoch Pratt Free Library
FELHC, Inc.
Federal Communication Commission
Fulton County PA
Fundamental Broadcasting LLC
GTT America LLC
Garden State Transmissions
Hardy Cellular Telephone Company
Hardy County OEM/E911
Huntingdon, County of
Juniata County Emergency Services
Lancaster County-Wide Communications
Loudoun, County of

Maryland Public Broadcasting Commission
Maryland State Highway Administration
Maryland, State of - Dept.of Info & Tech
Mifflin County
Montgomery, County of
New Cingular Wireless PCS - Maryland
New Cingular Wireless PCS LLC - VA
New Cingular Wireless PCS LLC - WV,NC,SC
New Cingular Wireless PCS, LLC - PA
Norfolk Southern Railway
Pennsylvania Turnpike Commission
Perry, County of
Prince George's County
Prince William, County of
Radio License Holding CBC, LLC
Radio One Inc
Rappahannock Electric Cooperative
Shenandoah Personal Communications, LLC
Shenandoah Valley Electric Cooperative
South Central Task Force (SCTFNET)
State of Maryland, MIEMSS
T-Mobile License LLC
Texas Eastern Communications, LLC
Thought Transmissions, LLC
Transcontinental Gas Pipeline Corp.
US Cellular Operating Company, LLC (WI)
USCOC of Cumberland, Inc.
USOC of Pennsylvania RSA No 10 B2 Inc.
Unifi Fiber PEG, LLC
Ursa Navigation Solutions, Inc.
Verizon Wireless (VAW) LLC - W/B/V Mkts
Virginia Department of State Police
Virginia Electric & Power Company
WV DHHR BPH, Office of Ems, Com. Div.
Warrenton Fauquier Joint Communications
Washington Gas Light Company
Washington Suburban Sanitary Commission
Williamson Enterprise LLC
World Class Wireless, LLC
iSignal

There are no unresolved interference objections with the station contained in these applications.

The following section presents the data pertinent to frequency coordination of the 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: 08/17/2018
 Job Number: 180817COMSGE04

Administrative Information

Status TEMPORARY (Operation from 10/01/2018 to 04/01/2019)
 Call Sign TEMP04
 Licensee Code INTELS
 Licensee Name Intelsat License LLC

Site Information

HAGERSTOWN, MD

Venue Name
 Latitude (NAD 83) 39° 35' 56.8" N
 Longitude (NAD 83) 77° 45' 23.0" W
 Climate Zone A
 Rain Zone 2
 Ground Elevation (AMSL) 165.08 m / 541.6 ft

Link Information

Satellite Type Geostationary
 Mode TO - Transmit-Only
 Modulation Digital
 Satellite Arc 103° W to 103° West Longitude
 Azimuth Range 216.5° to 216.5°
 Corresponding Elevation Angles 37.3° / 37.3°
 Antenna Centerline (AGL) 5.49 m / 18.0 ft

Antenna Information

Transmit - FCC32

Manufacturer Gen Dynamics/Satcom Tech
 Model 9 meter
 Gain / Diameter 53.7 dBi / 9.0 m
 3-dB / 15-dB Beamwidth 0.38° / 0.78°

Max Available RF Power (dBW/4 kHz) -21.2
 (dBW/MHz) 2.8

Maximum EIRP (dBW/4 kHz) 32.5
 (dBW/MHz) 56.5

Interference Objectives: Long Term -154.0 dBW/4 kHz 20%
 Short Term -131.0 dBW/4 kHz 0.0025%

Frequency Information

Transmit 6.1 GHz

Emission / Frequency Range (MHz) 23M0G7W / 6305.0

Max Great Circle Coordination Distance 117.5 km / 73.0 mi
 Precipitation Scatter Contour Radius 100.0 km / 62.1 mi

Coordination Values	HAGERSTOWN, MD
Licensee Name	Intelsat License LLC
Latitude (NAD 83)	39° 35' 56.8" N
Longitude (NAD 83)	77° 45' 23.0" W
Ground Elevation (AMSL)	165.08 m / 541.6 ft
Antenna Centerline (AGL)	5.49 m / 18.0 ft
Antenna Model	General Dynamics/Satcom Tech 9 meter
Antenna Mode	Transmit 6.1 GHz
Interference Objectives: Long Term	-154.0 dBW/4 kHz 20%
Short Term	-131.0 dBW/4 kHz 0.0025%
Max Available RF Power	-21.2 (dBW/4 kHz)

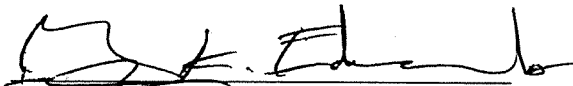
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	0.34	129.99	-10.00	102.69
5	0.59	133.15	-10.00	100.00
10	0.49	135.80	-10.00	100.00
15	0.38	138.09	-10.00	100.00
20	0.32	140.02	-10.00	104.75
25	0.32	141.55	-10.00	104.38
30	0.32	142.56	-10.00	104.50
35	0.30	143.00	-10.00	105.97
40	0.47	143.05	-10.00	100.00
45	0.57	142.46	-10.00	100.00
50	0.33	141.00	-10.00	103.28
55	0.41	139.35	-10.00	100.00
60	0.25	137.07	-10.00	110.00
65	0.28	134.58	-10.00	107.45
70	0.25	131.74	-10.00	109.84
75	0.28	128.68	-10.00	107.50
80	0.27	125.39	-10.00	108.41
85	0.31	121.96	-10.00	105.32
90	0.00	118.24	-10.00	114.00
95	0.00	114.56	-10.00	114.00
100	0.00	110.79	-10.00	114.00
105	0.00	106.95	-10.00	114.00
110	0.00	103.05	-10.00	114.00
115	0.00	99.12	-10.00	114.00
120	0.00	95.16	-10.00	114.00
125	0.00	91.18	-10.00	114.00
130	0.00	87.21	-10.00	114.00
135	0.00	83.24	-10.00	114.00
140	0.00	79.28	-10.00	114.00
145	0.00	75.36	-10.00	114.00
150	0.00	71.49	-10.00	114.00
155	0.00	67.67	-10.00	114.00
160	0.00	63.94	-10.00	114.00
165	0.00	60.30	-10.00	114.00
170	0.00	56.78	-10.00	114.00
175	0.00	53.41	-10.00	114.00
180	0.00	50.22	-10.00	114.00
185	0.00	47.27	-9.86	114.34

Coordination Values		HAGERSTOWN, MD	
Licensee Name		Intelsat License LLC	
Latitude (NAD 83)		39° 35' 56.8" N	
Longitude (NAD 83)		77° 45' 23.0" W	
Ground Elevation (AMSL)		165.08 m / 541.6 ft	
Antenna Centerline (AGL)		5.49 m / 18.0 ft	
Antenna Model		General Dynamics/Satcom Tech 9 meter	
Antenna Mode		Transmit 6.1 GHz	
Interference Objectives:	Long Term	-154.0 dBW/4 kHz	20%
	Short Term	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power		-21.2 (dBW/4 kHz)	

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.30	44.35	-9.17	107.70
195	0.00	42.23	-8.64	117.48
200	0.41	39.90	-8.02	102.58
205	0.26	38.51	-7.64	115.05
210	0.41	37.35	-7.31	104.42
215	0.39	36.90	-7.18	105.87
220	0.68	36.73	-7.13	100.00
225	0.60	37.51	-7.35	100.00
230	0.69	38.67	-7.68	100.00
235	0.82	40.29	-8.13	100.00
240	0.82	42.47	-8.70	100.00
245	1.13	44.80	-9.28	100.00
250	1.22	47.62	-9.94	100.00
255	1.24	50.74	-10.00	100.00
260	1.22	54.10	-10.00	100.00
265	1.01	57.71	-10.00	100.00
270	0.90	61.39	-10.00	100.00
275	0.82	65.16	-10.00	100.00
280	0.73	69.00	-10.00	100.00
285	0.70	72.89	-10.00	100.00
290	0.62	76.84	-10.00	100.00
295	0.50	80.82	-10.00	100.00
300	0.41	84.81	-10.00	100.00
305	0.41	88.81	-10.00	100.00
310	0.46	92.81	-10.00	100.00
315	0.52	96.81	-10.00	100.00
320	0.50	100.79	-10.00	100.00
325	0.36	104.71	-10.00	101.23
330	0.34	108.60	-10.00	103.03
335	0.54	112.49	-10.00	100.00
340	0.44	116.23	-10.00	100.00
345	0.43	119.89	-10.00	100.00
350	0.35	123.40	-10.00	102.43
355	0.46	126.85	-10.00	100.00

Certification

I hereby certify that I am the technically qualified person responsible for the preparation of the frequency coordination data contained in this report. I am familiar with Parts 101 and 25 of the FCC Rules and Regulations and I have either prepared or reviewed the frequency coordination data submitted with this report, and that it is complete and correct to the best of my knowledge and belief.

BY: 

Gary K. Edwards
Senior Manager
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: August 30, 2018

Exhibit B

Radiation Hazard Report

Analysis of Non-Ionizing Radiation for a 9 m Earth Station

This analysis provides the calculated non-ionizing radiation levels for a 9-meter earth station system.

The methods and calculations performed in this analysis are based on the FCC Office of Engineering and Technology Bulletin, No.65, October 1985 as 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 (Summarized in Annex 1). There are separate exposure limits applicable to the General Population/Uncontrolled Environment and the Occupational/Controlled Environment. The Maximum Permissible Exposure (MPE) limits for persons in a General Population/Uncontrolled environment for the frequency band of this antenna, is 1 mW/cm² for a 30 minute or lower time period as shown in Annex 1 (a). The MPE limit for persons in an Occupational/Controlled environment for the frequency band of this antenna is 5 mW/cm² for a 6 minute time or lower period as shown in Annex 1 (b). The purpose of this analysis described is to determine the power flux density levels of the earth station at the main reflector surface, the near-field, transition region, far-field, between the sub-reflector or feed and, at the main reflector surface, and between the antenna edge and the ground and to compare these levels to the specified MPEs.

The parameters of the antenna that is the subject of this analysis are shown in Table 1. Intermediate calculated values and constants are provided in Table 2.

Table 1. Input Parameters Used for Determining Power Flux Densities

Parameter	Symbol	Formula	Value	Units
Antenna Diameter	D	Input	9	m
Sub-reflector Diameter	D _{sr}	Input	116.84	cm
Frequency	F	Input	6305	MHz
Transmit Power	P	Input	1000	W
Antenna Gain (dBi)	G _{es}	Input	53.7	dBi

Table 2. Calculated Values and Constants

Parameter	Symbol	Formula	Value	Units
Antenna Surface Area	A _{surface}	$\pi D^2/4$	63.62	m ²
Area of Sub-reflector	A _{sr}	$\pi D_{sr}^2/4$	10721.93	cm ²
Wavelength	λ	300/F	0.047581	m
Antenna Gain (factor)	G	10 ^{Ges/10}	234422.88	n/a
Pi	π	Constant	3.1415927	n/a
Antenna Efficiency	η	$G\lambda^2/(\pi^2 D^2)$	0.66	n/a

1. Antenna Main Reflector Surface

The power density in the main reflector is determined from the Power level and the area of the main reflector aperture. This is determined from the following equation:

Power Density at the Main Reflector Surface:

$$\begin{aligned} S_{\text{surface}} &= 4P/A_{\text{surface}} && (1) \\ &= 62.876 \text{ W/m}^2 \\ &= 6.288 \text{ mW/cm}^2 \end{aligned}$$

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 is determined from the following equation:

Extent of the Near Field:

$$\begin{aligned} R_{\text{nf}} &= D^2 / (4\lambda) && (2) \\ &= 425.59 \text{ m} \end{aligned}$$

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

Near Field Density:

$$\begin{aligned} S_{\text{nf}} &= 16.0 \eta P / (\pi D^2) && (3) \\ &= 4.174 \text{ mW/cm}^2 \end{aligned}$$

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 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 is determined from the following equation:

Transition Region Power Density:

$$\begin{aligned} S_t &= S_{\text{nf}} R_{\text{nf}} / R_t && (4) \\ &= 4.174 \text{ mW/cm}^2 \end{aligned}$$

4. Far Field Distance Calculation

The distance to the Far Field Region is calculated using the following equation:

Distance to Far Field Region:

$$\begin{aligned} R_{ff} &= 0.6 D^2 / \lambda \\ &= 1021.410 \text{ m} \end{aligned} \quad (5)$$

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

On-axis Power Density in the Far Field:

$$\begin{aligned} S_{ff} &= G P / (4 \pi R_{ff}^2) \\ &= 1.788 \text{ mW/cm}^2 \end{aligned} \quad (6)$$

5. Region between the Main Reflector and the Ground

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

Power Density between Reflector and Ground:

$$\begin{aligned} S_g &= P / A_{\text{surface}} \\ &= 1.572 \text{ mW/cm}^2 \end{aligned} \quad (7)$$

6. Power Density at the Sub-reflector

Transmissions from the feed assembly are directed toward the sub-reflector surface, and are reflected back toward the main reflector. The most common feed assemblies are waveguide flanges, horns or sub-reflectors. The energy between the sub-reflector and the reflector surfaces is calculated by determining the power density at the sub-reflector surface. This is determined from the following equation:

Power Density at the Subreflector:

$$\begin{aligned} S_{sr} &= 4000 P / A_{sr} \\ &= 373.067 \text{ mW/cm}^2 \end{aligned} \quad (8)$$

7. Summary of Calculations

Table 3. Summary of Expected Radiation levels for Uncontrolled Environment

Region	Symbol	Calculated Maximum Radiation Power Density Level (mW/cm ²)	Hazard Assessment
1. Main Reflector	$S_{surface}$	6.288	Potential Hazard
2. Near Field (R _{nf} = 425.59 m)	S_{nf}	4.174	Potential Hazard
3. Transition Region (R _{nf} < R _t < R _{ff})	S_t	4.174	Potential Hazard
4. Far Field (R _{ff} = 1021.41 m)	S_{ff}	1.788	Potential Hazard
5. Between Main Reflector and Subreflector	S_{sr}	373.067	Potential Hazard
6. Between Main Reflector and Ground	S_g	1.572	Potential Hazard

Table 4. Summary of Expected Radiation levels for Controlled Environment

Region	Symbol	Calculated Maximum Radiation Power Density Level (mW/cm ²)	Hazard Assessment
1. Main Reflector	$S_{surface}$	6.288	Potential Hazard
2. Near Field (R _{nf} = 425.59 m)	S_{nf}	4.174	Satisfies FCC MPE
3. Transition Region (R _{nf} < R _t < R _{ff})	S_t	4.174	Satisfies FCC MPE
4. Far Field (R _{ff} = 1021.41 m)	S_{ff}	1.788	Satisfies FCC MPE
5. Between Main Reflector and Subreflector	S_{sr}	373.067	Potential Hazard
6. Between Main Reflector and Ground	S_g	1.572	Satisfies FCC MPE

It is the applicant's responsibility to ensure that the public and operational personnel are no exposed to harmful levels of radiation.

8. Conclusion

Based upon the above analysis, it is concluded that harmful levels of radiation may exist in those regions noted for the Uncontrolled (Table 3) Environment and the Controlled Environment (Table 4).

The antenna is located at an Intelsat License LLC's teleport facility in Mountainside, MD.

The teleport is a gated and fenced facility with secured access in and around the proposed antenna. The earth station will be marked with the standard radiation hazard warnings, as well as the area in the vicinity of the earth station to inform those in the general population, who might be working or otherwise present in or near the direct path of the main beam.

The applicant will ensure that the main beam of the antenna will be pointed at least one diameter away from any building, or other obstacles in those area that exceed the MPE levels. Since one diameter removed from the center of the main beam the levels are down by at least 20 dB, or by a factor of 100, these potential hazards do not exist for either the public, or for earth station personnel.

Finally, the earth station's operating personnel will not have access to areas that exceed the MPE levels, while the earth station is in operation. The transmitter will be turned off during those periods of maintenance, so that the MPE standard of 5.0 mW/cm^2 will be complied with for those regions in close proximity to the main reflector, which could be occupied by operating personnel.

"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 workers."

ANNEX 1
(MPE Levels)

a) Limits for General Population/Uncontrolled Exposure (MPE)

Frequency Range (MHz)	Power Density (mW/cm²)
30-300	0.2
300-1500	Frequency(MHz)*(4.0/1200)
1500-100,000	1

b) Limits for Occupational/Controlled Exposure (MPE)

Frequency Range (MHz)	Power Density (mW/cm²)
30-300	1
300-1500	Frequency(MHz)*(4.0/1200)
1500-100,000	5