

Approved by OMB  
3060-0678

Date & Time Filed:  
File Number: ---  
Callsign/Satellite ID:

<b>APPLICATION FOR EARTH STATION AUTHORIZATIONS</b>	<b>FCC Use Only</b>
<b>FCC 312 MAIN FORM FOR OFFICIAL USE ONLY</b>	

**APPLICANT INFORMATION**

Enter a description of this application to identify it on the main menu:  
Amendment for Cox TV Tulsa T/R Earth Station

1-8. Legal Name of Applicant			
Name:	Cox Television Tulsa, LLC	Phone Number:	918-491-0023
DBA Name:		Fax Number:	
Street:	2625 South Memorial Drive	E-Mail:	
City:	Tulsa	State:	OK
Country:	USA	Zipcode:	74129 -
Attention:	General Manager		
9-16. Name of Contact Representative			
Name:	Michael D. Basile	Phone Number:	202-776-2556
Company:	Cooley LLP	Fax Number:	
Street:	1299 Pennsylvania Avenue, NW Suite 700	E-Mail:	mdbasile@cooley.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20004-
Attention:	Michael Basile	Relationship:	Legal Counsel

**CLASSIFICATION OF FILING**

<p>17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.</p> <p>a.</p> <p><input checked="" type="radio"/> a1. Earth Station (N/A) a2. Space Station</p>	<p>b.</p> <p><input checked="" type="radio"/> b1. Application for License of New Station</p> <p><input type="radio"/> b2. Application for Registration of New Domestic Receive-Only Station (N/A) b3. Amendment to a Pending Application (N/A) b4. Modification of License or Registration (N/A) b5. Assignment of License or Registration (N/A) b6. Transfer of Control of License or Registration (N/A) b7. Notification of Minor Modification (N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite (N/A) b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States</p> <p><input type="radio"/> b10. Other (Please specify)</p> <p><input type="radio"/> b11. Application for Earth Station to Access a Non-U.S. satellite Not Currently</p>
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Authorized to Provide the Proposed Service in the Proposed Frequencies in the United States.

17c. 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): Amendment

17d.

Fee Classification

18. If this filing is in reference to an existing station, enter:

(a) Call sign of station:  
Not Applicable

19. If this filing is an amendment to a pending application enter:

(a) Date pending application was filed: (b) File number of pending application:

Not Applicable

Not Applicable

### TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply:

- a. Fixed Satellite  
 b. Mobile Satellite  
 c. Radiodetermination Satellite  
 d. Earth Exploration Satellite  
 e. Direct to Home Fixed Satellite  
 f. Digital Audio Radio Service  
 g. Other (please specify)

21. STATUS: Choose the button next to the applicable status. Choose only one.

Common Carrier  Non-Common Carrier

22. If earth station applicant, check all that apply.

- Using U.S. licensed satellites  
 Using Non-U.S. licensed satellites

23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:

Connected to a Public Switched Network  Not connected to a Public Switched Network  N/A

24. FREQUENCY BAND(S): Place an "X" in the box(es) next to all applicable frequency band(s).

- a. C-Band (4/6 GHz)  b. Ku-Band (12/14 GHz)  
 c. Other (Please specify upper and lower frequencies in MHz.)

Frequency Lower: Frequency Upper:

### TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.

- a. Fixed Earth Station  
 b. Temporary-Fixed Earth Station  
 c. 12/14 GHz VSAT Network  
 d. Mobile Earth Station  
(N/A) e. Geostationary Space Station  
(N/A) f. Non-Geostationary Space Station  
 g. Other (please specify)

26. TYPE OF EARTH STATION FACILITY: Choose only one.

- Transmit/Receive  Transmit-Only  Receive-Only  N/A

### PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)

Not Applicable

### ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. §§ 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.  Yes  No

Radiation Hazard

ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30-34.

29. Is the applicant a foreign government or the representative of any foreign government?  Yes  No

30. Is the applicant an alien or the representative of an alien?  Yes  No  N/A

31. Is the applicant a corporation organized under the laws of any foreign government?  Yes  No  N/A

32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?  Yes  No  N/A

33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?  Yes  No  N/A

34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.

### BASIC QUALIFICATIONS

35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules?  Yes  No  
If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.

36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explanation of circumstances.  Yes  No

37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explanation of circumstances.  Yes  No

38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances  Yes  No

39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhibit, an explanation of the circumstances.  Yes  No

40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting

10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer.

41. 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

42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in *47 C.F.R. 25.137, as appropriate*. If No, proceed to question 43.  Yes  No

42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?

43. Description. (Summarize the nature of the application and the services to be provided). Earth station will be used for news gathering in connection with commonly owned television stations.

43a. Geographic Service Rule Certification

By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25.  A

By selecting B, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will comply with such requirements.  B

By selecting C, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will not comply with such requirements because it is not feasible as a technical matter to do so, or that, while technically feasible, such services would require so many compromises in satellite design and operation as to make it economically unreasonable. A narrative description and technical analysis demonstrating this claim are attached.  C

### CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Choose the button next to applicable response.)

- Individual
- Unincorporated Association
- Partnership
- Corporation
- Governmental Entity
- Other (please specify)  
Limited Liability Corporation

45. Name of Person Signing  
Lance Lovell

46. Title of Person Signing  
Vice President, Legal

47. Please supply any need attachments.



E21. Common Name: ALSAT	E22. ITU Name:
E23. Orbit Location:	E24. Country: USA

**POINTS OF COMMUNICATION (Destination Points)**

E25. Site Identifier:	
E26. Common Name:	E27. Country:

**ANTENNA**

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size	E41/42. Antenna GainTransmint and/or Recieve(____ dBi at ____ GHz)	
Truck DSNG	1	1	AVL Technologies	1200-SNG	1.2	42.0 dBi at 12.0	
						43.5 dBi at 14.25	
E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	E36. Above Sea Level (meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers (dBW)
1	0.0/0.0	4.0	0.0	0.0	125.0	0.0	64.07

**FREQUENCY**

E28. Antenna Id	E43/44. Frequency Bands(MHz)	E45. T/R Mode	E46. Antenna Polarization (H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier(dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
1	11700 12200	R	Horizontal and Vertical	36M0G7W	0.0	0.0

**E50. Modulation and Services Compressed Digital Video and Audio**

1	14000 14500	T	Horizontal and Vertical	36M0G7W	64.069	24.5267
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**E50. Modulation and Services Compressed Digital Video and Audio****FREQUENCY COORDINATION**

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits (MHz)	E54/55. Range of Satellite Arc E/W Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
1	Geostationary	14000 145000	72.0/ 129.0	143.0	41.07	228.0	35.54	8.42

**REMOTE CONTROL POINT LOCATION****REMOTE CONTROL POINT LOCATION**

E61. Call Sign	E65. Phone Number
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**NOTE: Please enter the call sign of the controlling station, not the call sign for which this application is being filed.**

E62. Street Address

E63. City

E67. County

E64/68.  
State/Country  
/

E66. Zip  
Code

#### FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

The public reporting for this collection of information is estimated to average 0.25 - 24 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to [PRA@fcc.gov](mailto:PRA@fcc.gov). PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember - You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

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.

## Analysis of Non-Ionizing Radiation for a 1.2 Meter Earth Station System

This report analyzes the non-ionizing radiation levels for an Avl Technologies 1210K 1.2 meter Ku band 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 dependent 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 <sup>2</sup> )
30-300	0.2
300-1500	Frequency (MHz)*(0.8/1200)
1500-100,000	1.0

Table 2. Limits for General Population/Uncontrolled Exposure (MPE)

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

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

Parameter	Symbol	Formula	Value	Units
Antenna Diameter	D		1.2	m
Antenna Surface Diameter	A <sub>surface</sub>	$(\pi D^2)/4$	1.130973355	m <sup>2</sup>
Feed Flange Diameter	D <sub>fa</sub>		7.3025	cm
Area of Feed Flange	A <sub>fa</sub>	$(\pi D_{fa}^2)/4$	41.88254007	cm <sup>2</sup>
Frequency	F		14.25	GHz
Wavelength	$\lambda$	$300 / F$	0.021052632	m
Transmit Power	P		125	W
Antenna Gain (dbi)	G <sub>es</sub>		43.1	dBi
Antenna Gain (factor)	G	$10^{G_{es}/10}$	20417.37945	
Pi	$\pi$		3.141592654	
Antenna Efficiency	$\eta$		0.63672003	



## 1. Far Field Distance Calculation

The distance to the beginning of the far field can be determined from the following equation: (1)

$$\begin{aligned} \text{Distance to the Far Field Region} \quad R_{ff} &= 0.60D^2/l \\ &= 57.0634125 \quad \text{m} \end{aligned}$$

The maximum main beam power density in the far field can be determined from the following equation: (2)

$$\begin{aligned} \text{Distance to the Far Field Region} \quad S_{ff} &= G P / (4\pi R_{ff}^2) \\ &= 120.5828224 \quad \text{W/m}^2 \\ &= 12.05828 \quad \text{mW/cm}^2 \end{aligned}$$

## 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 can be determined from the following equation: (3)

$$\begin{aligned} \text{Extent of the Near Field} \quad R_{nf} &= D^2 / (4 \lambda) \\ &= 17.1 \quad \text{m} \end{aligned}$$

The maximum power density in the Near Field can be determined from the following equation: (4)

$$\begin{aligned} \text{Near Field Power Density} \quad S_{nf} &= 16.0\eta P / (\pi D^2) \\ &= 281.4920559 \quad \text{W/m}^2 \\ &= 28.14921 \quad \text{mW/cm}^2 \end{aligned}$$

## 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 maximum power density in the Transition region will not exceed that calculated for the Near Field region. The power density calculated in Section 2 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:

$$\begin{aligned} \text{Near Field Power Density} \quad S_t &= S_{nf} R_{nf} / R_t \\ &\leq 28.14920559 \quad \text{mW/cm}^2 \end{aligned} \quad (5)$$

## 4. Distance to Safe Region Calculation

Since the power density decreases inversely with the square of the distance in the Far Field region, the distance to the On-axis Power Density of 5 mW/cm<sup>2</sup> can be determined from the following equation:

$$\begin{aligned} \text{Distance to ANSI 5 mW/cm}^2 & \quad D_{\text{safe}} &= & R_{\text{ff}} ((S_{\text{ff}}/5)^{0.5}) & (6) \\ & &= & 63.7331 & \text{ meters} \end{aligned}$$

## 5. 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:

$$\begin{aligned} \text{Power Density at the Feed Flange} & \quad S_{\text{fa}} &= & 4000 P / A_{\text{fa}} & (7) \\ & &= & 11938.1489 & \text{ mW/cm}^2 \end{aligned}$$

## 6. 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:

$$\begin{aligned} \text{Power Density at the Reflector Surface} & \quad S_{\text{surface}} &= & 4 P / A_{\text{surface}} & (8) \\ & &= & 442.0970641 & \text{ W/m}^2 \\ & & & 44.2097 & \text{ mW/cm}^2 \end{aligned}$$

## 7. Off-axis Evaluation

For off-axis calculations in the Near Field and in the Transition region, it can be assumed that, if the point of interest is at least one antenna diameter removed from the center of the main beam, the power density at that point would be at least a factor of 100 (20dB) less than the value calculated for the equivalent distance in the main beam. For off-axis calculations in the Far Field, the calculated main-beam power density can be multiplied by the appropriate relative power density factor obtained from the antenna gain pattern. Since the proposed antenna meets or exceeds the performance specifications under Part 25.209 of the FCC rules, the off-axis gain for this antenna is equal to or greater than 10dBi less than the on-axis gain in any direction of 48 degrees or more removed from the centerline of the main beam.

The distance to the end of the Near Field can be determined from the following equation: (9)

$$\begin{aligned} \text{Near Field Off-axis Power Density} & \quad S_{\text{nf(off)}} &= & 0.01 S_{\text{nf}} \\ & &= & 0.2815 & \text{ mW/cm}^2 \end{aligned}$$

$$\begin{aligned} \text{Far Field Off-axis Power Density} & \quad S_{\text{ff(off)}} &= & .1 S_{\text{ff}} & (10) \\ & &= & 1.2058 & \text{ mW/cm}^2 \end{aligned}$$

## 8. Summary of Calculations

Table 4. Summary of Expected Radiation levels for Uncontrolled Environment

Region	Calculated Maximum Radiation Power		Hazard Assessment
	Density Level (mW/cm <sup>2</sup> )		
Far Field (Rff = 57.0634125 m)	Sff	12.0583	Potential Hazard
Near Field (Rnf = 17.1 m)	Snf	28.1492	Potential Hazard
Transition Region (Rnf < Rt < Rff)	St	28.1492	Potential Hazard
Safe Distance Region (Dsafe = 63.7331042701164 meters)	Dsafe	63.7331	Potential Hazard
Between Feed Assembly and Antenna Reflector	Sfa	11938.1489	Potential Hazard
Main Reflector Surface	S <sub>surface</sub>	44.2097	Potential Hazard
Far Field Off-axis Region	Sff <sub>(off)</sub>	1.2058	Potential Hazard
Near Field Off-axis Region (Between Reflector and ground)	Snf <sub>(off)</sub>	0.2815	Potential Hazard

Table 5. Summary of Expected Radiation levels for Controlled Environment

Region	Calculated Maximum Radiation Power		Hazard Assessment
	Density Level (mW/cm <sup>2</sup> )		
Far Field (Rff = 57.0634125 m)	Sff	12.0583	Potential Hazard
Near Field (Rnf = 17.1 m)	Snf	28.1492	Potential Hazard
Transition Region (Rnf < Rt < Rff)	St	28.1492	Potential Hazard
Safe Distance Region (Dsafe = 63.7331042701164 meters)	Dsafe	63.7331	Potential Hazard
Between Feed Assembly and Antenna	Sfa	11938.1489	Potential Hazard
Main Reflector Surface	S <sub>surface</sub>	44.2097	Potential Hazard
Far Field Off-axis Region	Sff <sub>(off)</sub>	1.2058	Potential Hazard
Near Field Off-axis Region (Between Reflector and ground)	Snf <sub>(off)</sub>	0.2815	Potential Hazard

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

## 8. Summary of Calculations

Based on this analysis it is concluded that the FCC RF Guidelines have been exceeded in the specific regions of Tables 4 and 5. The applicant proposes to comply with the Maximum Permissible Exposure (MPE) limits of 1 mW/cm<sup>2</sup> for the Uncontrolled areas and the MPE limits of 5 mW/cm<sup>2</sup> for the Controlled areas by one or more of the following methods:

### Means of Compliance - Uncontrolled Areas

This antenna will be located on a vehicle rooftop. The distance from the ground to the center of the antenna is approximately 4.1 meters. The location will be sufficient to prohibit access to the areas that exceed the MPE limits. The general public will not have access to areas within ½ diameter removed from the edge of the antenna.

Radiation hazard signs will be posted at any rooftop access location. The signs will be completely visible from the ground.

The applicant will ensure that no buildings or other obstacles will be in the areas that exceed the MPE levels.

### Means of Compliance - Controlled Areas

The earth station's operational personnel will not have access to the areas that exceed the MPE levels while the earth station is in operation.

The transmitters will be turned off during antenna maintenance.

### Means of Compliance – Safety in General

This antenna system is located on a mobile unit and conditions will vary from operating site to operating site. Because of this, the licensee will establish procedures for the operational personnel to verify that the antenna is not pointing in the direction of populated areas, and that access to hazardous areas are restricted while the unit is in operation.

In addition, the transmit power used in these calculations is greater than that which will typically be utilized by the earth station. During normal operation, the typical power level would generally not exceed more than 50 to 75 percent of the indicated transmitter power. Maximum transmit power would generally only occur in conditions of extreme inclement weather.