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File Number: SES-AMD-INTR2014-00390

**FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD  
- MAIN FORM**

FCC Use Only

**FCC 312 MAIN FORM FOR OFFICIAL USE ONLY**

**APPLICANT INFORMATION**

Enter a description of this application to identify it on the main menu:  
AMENDMENT TELEVISA SA de CV MOB-6

1-8. Legal Name of Applicant

Name: TELEVISA, SA de CV Phone Number: 2028281860  
DBA Name: Fax Number: 2029555564  
Street: 800 17TH STREET NW, STE 1100 E-Mail: NORM.LEVENTHAL@HKLAW.COM  
City: WASHINGTON State:  
Country: USA Zipcode: -  
Attention: NORMAN LEVENTHAL ESQ

9-16. Name of Contact Representative

Name: NORM Phone Number: LEVENTHAL  
Company: HOLLAND & KNIGHT LLP Fax Number: 2028281860  
Street: 800 17TH STREET, N.W. E-Mail: NORM.LEVENTHAL@HKLAW.COM  
SUITE 1100  
City: WASHINGTON State: DC  
Country: USA Zipcode: 20006-3906  
Attention: NORM LEVENTHAL Relationship: Legal Counsel

**CLASSIFICATION OF FILING**

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.

- a1. Earth Station  
 a2. Space Station

- (N/A) b1. Application for License of New Station  
(N/A) b2. Application for Registration of New Domestic Receive-Only Station  
 b3. Amendment to a Pending Application  
 b4. Modification of License or Registration  
b5. Assignment of License or Registration  
b6. Transfer of Control of License or Registration  
 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  
(N/A) b10. Other (Please specify)  
(N/A) b11. Application for Earth Station to Access a Non-U.S. satellite Not Currently 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):

17d.

Fee Classification CGV - Fixed Satellite VSAT System

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

(a) Call sign of station:

19. If this filing is an amendment to a pending application enter both fields, if this filing is a modification please enter only the file number:

(a) Date pending application was filed:

(b) File number:

02/21/2014

SESLIC2014022100094

### 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: (Please specify additional frequencies in an attachment)

### 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  
 e. Geostationary Space Station  
 f. Non-Geostationary Space Station  
 g. Other (please specify)

26. TYPE OF EARTH STATION FACILITY:

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

"For Space Station applications, select 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.)

- a -- authorization to add new emission designator and related service  
 b -- authorization to change emission designator and related service  
 c -- authorization to increase EIRP and EIRP density  
 d -- authorization to replace antenna  
 e -- authorization to add antenna  
 f -- authorization to relocate fixed station  
 g -- authorization to change frequency(ies)

- h -- authorization to add frequency
- i -- authorization to add Points of Communication (satellites & countries)
- j -- authorization to change Points of Communication (satellites & countries)
- k -- authorization for facilities for which environmental assessment and radiation hazard reporting is required
- l -- authorization to change orbit location
- m -- authorization to perform fleet management
- n -- authorization to extend milestones
- o -- Other (Please specify)

### 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 RPT**

**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.

**ALIEN OWNERSHIP**

### 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.  Yes  No  
See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes.

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.  Yes  No  
If No, proceed to question 43.

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). **Televisa is a television company in Mexico City which uses these facilities to cover sporting events in the U.S. for transmission to Mexico City**

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

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### 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)

45. Name of Person Signing  
William Aguirre Ballesteros

46. Title of Person Signing  
General Satellite Director of Televisa

**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).**

## **SATELLITE EARTH STATION AUTHORIZATIONS FCC Form 312 - Schedule B:(Technical and Operational Description)**

**FOR OFFICIAL USE ONLY**

Location of Earth Station Site

E1: Site Identifier: CONUS

E5. Call Sign:

NEW

E2. Contact Name William Aguirre Ballesteros E6. Phone Number: 525552247161  
 E3. Street: 1001 Russell Street E7. City: Multiple  
 E4. State E8. County: USA  
 E10. Area of Operation: CONUS E9. Zip Code  
 E11. Latitude: 0 ° 0 ' 0.0 " E12. Longitude: 0 ° 0 ' 0.0 "  
 E13. Lat/Lon Coordinates are:  NAD-27  NAD-83  N/A  
 E14. Site Elevation (AMSL): 0.0 meters

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide as a technical analysis showing compliance with two-degree spacing policy.	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A
E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non-geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	<input type="radio"/> Yes <input checked="" type="radio"/> No
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	<input type="radio"/> Yes <input checked="" type="radio"/> No
E19. Is coordination with another country required? If YES, attach the name of the country (ies) and plot of coordination contours as	<input type="radio"/> Yes <input checked="" type="radio"/> No
<b>E20. FAA Notification - (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.</b>	<input type="radio"/> Yes <input checked="" type="radio"/> No

**POINTS OF COMMUNICATION**

Satellite Name: OTHER   OTHER   If you selected OTHER, please enter the following:	
E21. Common Name: ALSAT	E22. ITU Name:
E23. Orbit Location:	E24. Country: USA

**POINTS OF COMMUNICATION (Destination Points)**

E25. Site Identifier: CONUS	
E26. Common Name: ALSAT	E27. Country: Mexico

**ANTENNA**

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size	E41/42. Antenna Gain Transmint and/or Recieve(____dBi at ____GHz)
CONUS	TVSA MOB-6	1	NORSAT	NS-3200	1.0	40.5 dBi at 11.85
CONUS	TVSA MOB-6	1	NORSAT	NS-3200	1.0	42.0 dBi at 14.15

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)
TVSA MOB-6	1.0/1.0	3.0	18.0	10.0	200.0	1.5	64.0

**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 EIRP Density per Carrier (dBW/4kHz)
TVSA MOB-6	14000 14500	T	Horizontal and Vertical	20MOG2F	53.77	-21.4
E50. Modulation and Services QPSK-SCPC Digital carrier transmitting video and audio service						
TVSA MOB-6	14000 14500	T	Horizontal and Vertical	40MOG2F	56.8	-21.4
E50. Modulation and Services QPSK-SCPC Digital carrier transmitting video and audio service						

#### FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits (MHz)	E54/55. Range of Satellite Arc Eastern/Western 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)
TVSA MOB-6	Geostationary	14000 14500	83.0/99.2	128.0	28.0	218.0	59.0	21.4

#### REMOTE CONTROL POINT LOCATION

E61. Call Sign			E66. Phone Number			
NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.						
E62. Street Address						
E63. City			E68. County		E67/68. State/Country	E64. Zip Code

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

The public reporting for this collection of information is estimated to average 2 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-PERF, 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. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

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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.

## Analysis of Non-Ionizing Radiation for a 1.0-Meter Earth Station System

This report analyzes the non-ionizing radiation levels for a 1.0-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 <sup>2</sup> )
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 <sup>2</sup> )
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	1.0	m
Antenna Surface Area	A <sub>surface</sub>	$\pi D^2 / 4$	0.79	m <sup>2</sup>
Feed Flange Diameter	D <sub>fa</sub>	Input	10.0	cm
Area of Feed Flange	A <sub>fa</sub>	$\pi D_{fa}^2 / 4$	78.54	cm <sup>2</sup>
Frequency	F	Input	14250	MHz
Wavelength	$\lambda$	300 / F	0.021053	m
Transmit Power	P	Input	200.00	W
Antenna Gain (dBi)	G <sub>es</sub>	Input	42.0	dBi
Antenna Gain (factor)	G	10 <sup>G<sub>es</sub>/10</sup>	15848.9	n/a
Pi	$\pi$	Constant	3.1415927	n/a
Antenna Efficiency	$\eta$	$G\lambda^2 / (\pi^2 D^2)$	0.71	n/a

## 1. Far Field Distance Calculation

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

$$\begin{aligned} \text{Distance to the Far Field Region} \quad R_{ff} &= 0.60 D^2 / \lambda \\ &= 28.5 \text{ m} \end{aligned} \quad (1)$$

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

$$\begin{aligned} \text{On-Axis Power Density in the Far Field} \quad S_{ff} &= G P / (4 \pi R_{ff}^2) \\ &= 310.549 \text{ W/m}^2 \\ &= 31.055 \text{ mW/cm}^2 \end{aligned} \quad (2)$$

## 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:

$$\begin{aligned} \text{Extent of the Near Field} \quad R_{nf} &= D^2 / (4 \lambda) \\ &= 11.9 \text{ m} \end{aligned} \quad (3)$$

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

$$\begin{aligned} \text{Near Field Power Density} \quad S_{nf} &= 16.0 \eta P / (\pi D^2) \\ &= 724.958 \text{ W/m}^2 \\ &= 72.496 \text{ mW/cm}^2 \end{aligned} \quad (4)$$

## 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:

$$\begin{aligned} \text{Transition Region Power Density} \quad S_t &= S_{nf} R_{nf} / R_t \\ &= 72.496 \text{ mW/cm}^2 \end{aligned} \quad (5)$$





#### 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:

$$\begin{aligned} \text{Power Density at the Feed Flange} \quad S_{fa} &= 4000 P / A_{fa} & (6) \\ &= 10185.916 \text{ mW/cm}^2 \end{aligned}$$

#### 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:

$$\begin{aligned} \text{Power Density at the Reflector Surface} \quad S_{\text{surface}} &= 4 P / A_{\text{surface}} & (7) \\ &= 1018.592 \text{ W/m}^2 \\ &= 101.859 \text{ mW/cm}^2 \end{aligned}$$

#### 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:

$$\begin{aligned} \text{Power Density between Reflector and Ground} \quad S_g &= P / A_{\text{surface}} & (8) \\ &= 254.648 \text{ W/m}^2 \\ &= 25.465 \text{ mW/cm}^2 \end{aligned}$$

## 7. Summary of Calculations

Table 4. Summary of Expected Radiation levels for Uncontrolled Environment

Region	Calculated Maximum Radiation Power Density Level (mW/cm <sup>2</sup> )		Hazard Assessment
1. Far Field ( $R_{ff} = 28.5$ m)	$S_{ff}$	31.055	Potential Hazard
2. Near Field ( $R_{nf} = 11.9$ m)	$S_{nf}$	72.496	Potential Hazard
3. Transition Region ( $R_{nf} < R_t < R_{ff}$ )	$S_t$	72.496	Potential Hazard
4. Between Feed Assembly and Antenna Reflector	$S_{fa}$	10185.916	Potential Hazard
5. Main Reflector	$S_{surface}$	101.859	Potential Hazard
6. Between Reflector and Ground	$S_g$	25.465	Potential Hazard

Table 5. Summary of Expected Radiation levels for Controlled Environment

Region	Calculated Maximum Radiation Power Density Level (mW/cm <sup>2</sup> )		Hazard Assessment
1. Far Field ( $R_{ff} = 28.5$ m)	$S_{ff}$	31.055	Potential Hazard
2. Near Field ( $R_{nf} = 11.9$ m)	$S_{nf}$	72.496	Potential Hazard
3. Transition Region ( $R_{nf} < R_t < R_{ff}$ )	$S_t$	72.496	Potential Hazard
4. Between Feed Assembly and Antenna Reflector	$S_{fa}$	10185.916	Potential Hazard
5. Main Reflector	$S_{surface}$	101.859	Potential Hazard
6. Between Reflector and Ground	$S_g$	25.465	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. Conclusions

## 9. Conclusions

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

The area around this antenna will be roped off while this system is in operation. The general public will not have access to areas within ½ diameters from the edge of the antenna.

Since one diameter removed from the main beam of the antenna or  $\frac{1}{2}$  diameter removed from the edge of the antenna the RF levels are reduced by a factor of 100 or 20 dB. None of the areas exceeding the MPE levels will be accessible by the general public.

Radiation hazard signs will be posted while this earth station is in operation.

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.

**ALIEN OWNERSHIP**

The applicant, Televisa S.A. de C.V., is a Mexican corporation the majority of whose corporate officers and directors are Citizens of the United Mexican States (“Mexico). Televisa is owned by Grupo Televisa, S.A.B. a Mexican Corporation based in Mexico City. Grupo Televisa is owned by public shareholders located worldwide.

Such ownership by non-U.S. entities is not a bar to the grant of a Temporary Fixed Earth Station authorization. Indeed, Bay City Television, Inc., a sister company, also ultimately owned by Grupo Televisa, itself currently holds such authorizations as well as a 325 permit to transmit local news and other programming electronically to Station XETV(TV), Tijuana, B.C., Mexico (File No. 325-RWL-20130430-00001).

Neither Televisa nor Grupo Televisa are representatives of a foreign government.

# Agency Tracking ID:PGC2470893 Authorization Number:281939 Successful Authorization -- Date Paid: 2/28/14 FILE COPY ONLY!!

READ INSTRUCTIONS CAREFULLY BEFORE PROCEEDING  (1) LOCKBOX #979093	FEDERAL COMMUNICATIONS COMMISSION <b>REMITTANCE ADVICE</b> <b>FORM 159</b> PAGE NO 1 OF 1	APPROVED BY OMB 3060-059  SPECIAL USE  FCC USE ONLY
<b>SECTION A - Payer Information</b>		
(2) PAYER NAME (if paying by credit card, enter name exactly as it appears on your card) <b>HOLLAND &amp; KNIGHT LLP</b>		(3) TOTAL AMOUNT PAID (dollars and cents) <b>\$180.00</b>
(4) STREET ADDRESS LINE NO. 1 <b>800 17TH STREET, STE. 1100</b>		
(5) STREET ADDRESS LINE NO. 2 <b>TELECOM-C. NAFTALIN</b>		
(6) CITY <b>WASHINGTON</b>		(7) STATE <b>DC</b>
(8) ZIP CODE <b>20006-3906</b>		
(9) DAYTIME TELEPHONE NUMBER (INCLUDING AREA CODE) <b>202-9553000 x7040</b>		(10) COUNTRY CODE (IF NOT IN U.S.A.) <b>US</b>
<b>FCC REGISTRATION NUMBER (FRN) AND TAX IDENTIFICATION NUMBER (TIN) REQUIRED</b>		
(11) PAYER (FRN) <b>0004148995</b>		(12) FCC USE ONLY
<b>IF PAYER NAME AND THE APPLICANT NAME ARE DIFFERENT, COMPLETE SECTION B IF MORE THAN ONE APPLICANT, USE CONTINUATION SHEETS (FORM 159-C)</b>		
(13) APPLICANT NAME <b>TELEVISA, SA de CV</b>		
(14) STREET ADDRESS LINE NO. 1 <b>800 17TH STREET NW, STE 1100</b>		
(15) STREET ADDRESS LINE NO. 2		
(16) CITY <b>WASHINGTON</b>		(17) STATE -
(18) ZIP CODE -		
(19) DAYTIME TELEPHONE NUMBER (INCLUDING AREA CODE) <b>2028281860</b>		(20) COUNTRY CODE (IF NOT IN U.S.A.) <b>US</b>
<b>FCC REGISTRATION NUMBER (FRN) AND TAX IDENTIFICATION NUMBER (TIN) REQUIRED</b>		
(21) APPLICANT (FRN) <b>0016686628</b>		(22) FCC USE ONLY
<b>COMPLETE SECTION C FOR EACH SERVICE, IF MORE BOXES ARE NEEDED, USE CONTINUATION SHEET</b>		
(23A) FCC Call Sign/Other ID		(24A) Payment Type Code(PTC) <b>CGV</b>
		(25A) Quantity <b>1</b>
(26A) Fee Due for (PTC) <b>\$180.00</b>		(27A) Total Fee <b>\$180.00</b>
(28A) FCC CODE 1		(29A) FCC CODE 2 <b>IB2014000390</b>
(23B) FCC Call Sign/Other ID		(24B) Payment Type Code(PTC)
		(25B) Quantity
(26B) Fee Due for (PTC)		(27B) Total Fee
		FCC Use Only
(28B) FCC CODE 1		(29B) FCC CODE 2