Date & Time Filed: Apr 9 2007 4:50:42:216PM File Number: SES-MOD-INTR2007-00850

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: April 2007 Modification to North Las Vegas VSAT Authorization E940460

1–8. Legal Name of Applicant						
Name	: HNS License Sub, LLC	Phone Number:	301-428-5506			
DBA Name	:	Fax Number:	301–428–2802			
Street	: 11717 Exploration Lane	E–Mail:	sdoiron@hns.com			
City:	Germantown	State:	MD			
Count	ry: USA	Zipcode:	20876 –			
Attent	ion: Mr. Steven Doiron					

#### 9–16. Name of Contact Representative

Name: Stephen D. Baruch, Esq. Phone Number: 202–416–6782

**Company:** Leventhal Senter & Lerman PLLC **Fax Number:** 202–293–7783

Street: 2000 K Street, NW E-Mail: sbaruch@lsl-law.com

Suite 600

City: Washington State: DC

Country: USA Zipcode: 20006–

Attention: 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

**b** 3. Amendment to a Pending Application

**b**4. Modification of License or Registration

b5. Assignment of License or Registration

b6. Transfer of Control of License or Registration

**b**7. 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

(N/A) b12. Application for Database Entry

b13. Amendment to a Pending Database Entry Application

b14. Modification of Database Entry

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):	Other(please explain):						
17d.							
Fee Classification CGV – Fixed Satellite VSAT System							
18. If this filing is in reference to an existing station, enter:  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) Call sign of station: (b) File number: E940460							
SESMFS2006072001216							

## 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 22. If earth station applicant, check all that apply.
only one. Using U.S. licensed satellites
Common Carrier
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 sta	tion that applies. Choose only	one.	
a. Fixed Earth Station				
o b. Temporary–Fixed Earth Station				
o. 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/Δ		
Transmit/Receive Transmit-Only "For Space Station applications, select N/A."	O Receive—Only	O 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 & Double
j — authorization to change Points of Communication (satellites & Double of Communication (satellites & Doub
k — authorization for facilities for which environmental assessment and
radiation hazard reporting is required
1 — authorization to change orbit location
m — authorization to perform fleet management
n — authorization to extend milestones
o — Other (Please specify)

#### **ENVIRONMENTAL POLICY**

under the laws of a foreign country?

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.		Exhi	bit C			
ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeronateronautical fixed radio station services are not required to respond to Items 30–34.	autic	cal en	rou	te or		
29. Is the applicant a foreign government or the representative of any foreign government?	0	Yes	•	No		
30. Is the applicant an alien or the representative of an alien?	0	Yes	0	No	•	N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	0	Yes	0	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	0	Yes	0	No	•	N/A

O Yes O No

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

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?	O Yes O	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? If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.	<b>o</b> Yes	No
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 explination of circumstances.	O 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 explination of circumstances.	• Yes	<b>⊚</b> 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 exhinit, an explanation of the circumstances.	• Yes	<b>⊘</b> 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	O 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  Exhibit D	O 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? See Exhibit D.					
43. Description. (Summarize the nature of the application and the services to be provided). (If the complete description, please go to the end of the form to view it in its entirety.)	tion does not a	ppear in this			
See Exhibit A.					
Exhibit A					

#### **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.

due, complete and correct to the best of his of her knowledge and ber	ier, and are made in good faith.		
44. Applicant is a (an): (Choose the button next to applicable respons	e.)		
<ul> <li>Individual</li> <li>Unincorporated Association</li> <li>Partnership</li> <li>Corporation</li> <li>Governmental Entity</li> <li>Other (please specify)</li> </ul>			
45. Name of Person Signing Steven Doiron >	Individual Unincorporated Association Partnership Corporation Governmental Entity Other (please specify)  5. Name of Person Signing teven Doiron  46. Title of Person Signing Senior Director, Regulatory Affairs		

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 E5. Call Sign: E1: Site Identifier: HUB 5.6M E940460 E2: Contact Name David Fahey E6. Phone 702-271-6048 Number: E3. Street: North Las Vegas One Aerojet Way E7. City: E8. County: Clark E9. Zip Code E4. State NV89030 E10. Area of Operation: N/A E11. Latitude: 36 °14 '11.0 "N E12. Longitude: 115 °7 '4.0 "W E13. Lat/Lon Coordinates are: **⋒** NAD-83 NAD-27 N/A E14. Site Elevation (AMSL): 583.1 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.

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Se Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated by measurements?	posed antenna(s) comply with the antenna	O Yes	O No	<b>⊚</b> N/A
E17. Is the facility operated by remote control? If YES, provide the loca point.	ation and telephone number of the control	O Yes	•	No
E18. Is frequency coordination required? If YES, attach a frequency coordination	ordination report as	Yes		No
		O Yes	<u> </u>	110
E19. Is coordination with another country required? If YES, attach the recoordination contours as	name of the country(ies) and plot of	O Yes	•	No
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.		O Yes	•	No
POINTS OF COMMUNICATION		!		-
Satellite Name: AMC-15   AMC-15   105 W.L. If you selected OTHI	ER, please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: OTHER   OTHER   If you selected OTHER, please e	nter the following:			

E21. Common Name: SATMEX-6	E22. ITU Name: SATMEX-6
E23. Orbit Location: 113 W.L.	E24. Country: Mexico

Satellite Name: AMC-16   AMC 16   97 W.L.	If you selected OTHER, please enter the following:		
E21. Common Name:		E22. ITU Name:	
E23. Orbit Location:	]	E24. Country:	

Satellite Name: OTHER   OTHER	If you selected OTHER, please en	ter the following:
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 <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)
HUB 5.6M	HUB 5.6M	2	Andrew Corp.	ES56-1	5.6	55.4 dBi at 12.0000
HUB 5.6M	HUB 5.6M	2	Andrew Corp.	ES56-1	5.6	56.8 dBi at 14.0000

Id	Diameter		,	Height Above Ground Level	Input Power at	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
HUB 5.6M	5.6/5.6	6.5	589.6	0.0	125.0	0.0	77.7

## FREQUENCY

	E43/44. Frequency Bands (MHz)	E45. T/R Mode			E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
HUB 5.6M	11700.0000 12200.0000	R	Horizontal and Vertical	400KG7D	0.0	0.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

DIGITAL PSK, DATA, 256KSPS, INROUTE CARRIER

HUB 5.6M	11700.0000	R	Horizontal and	200KG7D	0.0	0.0
	12200.0000		Vertical			

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

DIGITAL PSK, DATA, 128 KSPS, INROUTE CARRIER

HUB 5.6M	11700.0000 12200.0000	R	Horizontal and Vertical	800KG7D	0.0	0.0
E50. Modulati entirety.)	ion and Services (I	f the complete d	lescription does not appear	in this box, please	go to the end of t	he form to view it in its
DIGITAL	PSK, DATA, 512	KSPS, INRC	OUTE CARRIER			
HUB 5.6M	11700.0000 12200.0000	R	Horizontal and Vertical	1M60G7D	0.0	0.0
DIGITAL	PSK, DIGITAL,	1024 KSPS,	INROUTE CARRIER			
HUB 5.6M	14000.0000 14500.0000	Т	Horizontal and Vertical	6M00G7D	67.7	35.9
E50. Modulati entirety.)	ion and Services (I	f the complete d	lescription does not appear	in this box, please	go to the end of t	he form to view it in its
DIGITAL	PSK, DATA, 5 M	SPS, OUTROU	JTE CARRIER			

HUB 5.6M	14000.0000 14500.0000	Т	Horizontal and Vertical	12M0G7D	70.7	35.9
E50. Modulat entirety.)	ion and Services (I	If the complete of	description does not appear	in this box, please	go to the end of the	ne form to view it in its
DIGITAL	PSK, DATA, 10	MSPS, OUTRO	OUTE CARRIER			
HUB 5.6M	14000.0000 14500.0000	Т	Horizontal and Vertical	24M0G7D	77.7	39.9
	PSK, DATA, 20					
HUB 5.6M	14000.0000 14500.0000	Т	Horizontal and Vertical	36M0G7D	77.7	38.2
entirety.)	ion and Services (I		description does not appear	in this box, please	go to the end of the	ne form to view it in its

HUB 5.6M	14000.0000 14500.0000	Т	Horizontal and Vertical	400KG7D	52.9	32.9
E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
DIGITAL PS	К, DATA, 256 К	SPS, OUTROUTE	CARRIER			
HUB 5.6M	14000.0000 14500.0000	Т	Horizontal and Vertical	1M60G7D	58.9	32.9
E50. Modulation entirety.)	and Services (If the K, DATA, 1024			this box, please go to	o the end of the form	to view it in its
	, 2, 1021		· Gamazan			

## FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	Frequency	Range of Satellite Arc Eastern/West	Station Azimuth Angle	Antenna	Station Azimuth Angle	Antenna Elevation Angle Western	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
			/					

REMOTE CONTROL POINT LOCATION

E61. Call Sign	E66. Phone Number			
NOTE: Please enter the callsign of the control callsign for which this application is being filed.				
E62. Street Address		•		
E63. City	E68. County		E67/68. State/Country	E64. Zip Code

## SATELLITE EARTH STATION AUTHORIZATIONS

FCC Form 312 – Schedule B:(Technical and Operational Description)
FOR OFFICIAL USE ONLY

Location of Earth St	ation Site				
E1: Site Identifier:	TFTR 98CM	E5. Call Sign:	E940460		
E2: Contact Name	David Fahey	E6. Phone Number:	702–271–6048		
E3. Street:	One Aerojet Way	E7. City:	North Las Vegas		
		E8. County:	Clark		
E4. State	NV	E9. Zip Code	89030		
E10. Area of Operation:		CONUS, AK, HI, VI, PR			
E11. Latitude:	0 °0 '0.0 "N				
E12. Longitude:	0 °0 '0.0 "W				
E13. Lat/Lon Coordinates are:		O NAD-27	● NAD-83	O 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.	O Yes	<b>⊗</b> No	O 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?	<b>O</b> Yes	O No	<b>⊚</b> N/A

E17. Is the facility operated by remote control? If YES, provide the loc point.	ation and telephone number of the control		O No
E18. Is frequency coordination required? If YES, attach a frequency co	ordination report as	O Yes	<b>⊘</b> No
E19. Is coordination with another country required? If YES, attach the coordination contours as	name of the country(ies) and plot of	O Yes	<b>⊚</b> No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.1 have you attached a copy of a completed FCC Form 854 and/or the FA the structure to aviation?  FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL APPLICATION.	A's study regarding the potential hazard of	O Yes	<b>⊘</b> No
POINTS OF COMMUNICATION		!	
Satellite Name: AMC-3   AMC-3   87 W.L. If you selected OTHER	, please enter the following:		
E21. Common Name:	E22. ITU Name:		
E23. Orbit Location:	E24. Country:		
Satellite Name: AMC-6   AMC-6   72 W.L. If you selected OTHER	, please enter the following:		
E21. Common Name:	E22. ITU Name:		
E23. Orbit Location:	E24. Country:		
	•		
Satellite Name: GALAXY III-C   GALAXY III-C   95 W.L. If you	selected OTHER, please enter the following:		

E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: SATMEX 6   SATMEX 6   113 W.L. If you selected O	THER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: INTELSAT AMERICAS 5   USASAT-24D   97 W.L.	If you selected OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: HORIZONS 1   HORIZONS 1   127 DEG WL If you s	selected OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: IA-8   IA-8   89 W.L. If you selected OTHER, please	enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: AMSC-9   AMERICOM 9   85 W.L. If you selected O	THER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: SATMEX 6   SATMEX 6   113 W.L. If you selected O	THER, please enter the following:

E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
	•
Satellite Name: GALAXY 4R   GALAXY 4R   99 W.L. If you selecte	d OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
	•
Satellite Name: AMC-4 (formerl GE-4   AMC-4   101 W.L. If you see	elected OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
	•
Satellite Name: SATMEX 6   SATMEX 6   113 W.L. If you selected C	OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: GALAXY XI   GALAXY XI   91 W.L. If you selected	d OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: SATMEX-5   SATMEX-5   116.8 W.L. If you selected	ed OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: GALAXY 10R   GALAXY 10R   123 W.L. If you seld	ected OTHER, please enter the following:

E21. Common N	1. Common Name:				E22. ITU Name:				
E23. Orbit Loca	tion:			E24. Country:					
POINTS OF	COMMUNICAT	ON (Destination	Points)						
E25. Site Identif	fier:								
E26. Common Name:				E27. Country:					
ANTENNA									
Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)			
TFTR 98CM	TFTR 98CM	54000	Prodelin	3981–226	0.98	39.9 dBi at 11.9500			
TFTR 98CM	TFTR 98CM	54000	Prodelin	3981–226	0.98	41.3 dBi at 14.2500			
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)		
TFTR 98CM	0.0/0.0	0.0	0.0	0.0	2.0	0.0	44.3		

## FREQUENCY

	r Carrier   ERIP Dei	nsity per
$\begin{array}{ c c c c c }\hline (MHz) & & & & & & & & & & \\\hline (dBW) & & & & & & & & & \\\hline \end{array}$	Carrier (dBW/4k)	ша)

TFTR 98CM	11700.0000 12200.0000	R	Horizontal and Vertical	800KG7D	0.0	0.0		
E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear i	n this box, please go t	o the end of the form	to view it in its		
DIGITAL PS	K, DIGITAL, 51	2 KSPS, RETURN	CARRIER					
TFTR 98CM	11700.0000 12200.0000	R	Horizontal and Vertical	1M60G7D	0.0	0.0		
E50. Modulation entirety.)  DIGITAL PS	· ·	24 KSPS, RETUR	••	n this box, please go t				
TFTR 98CM	11700.0000 12200.0000	R	Horizontal and Vertical	24M0G7D	0.0	0.0		
E50. Modulation entirety.)	and Services (If the	ne complete description	on does not appear i	n this box, please go t	o the end of the form	to view it in its		
DIGITAL PS	DIGITAL PSK, DATA, 20 MSPS, MULTIMEDIA BROADCAST CARRIER							

TFTR 98CM	11700.0000 12200.0000	R	Horizontal and Vertical	36M0G7D	0.0	0.0		
E50. Modulation entirety.)	and Services (If	the complete descripti	on does not appear	in this box, please go	to the end of th	e form to view it in its		
DIGITAL PS	K, DATA, 30 M	ISPS, MULTIMEDIA	A BROADCAST CA	RRIER				
TFTR 98CM	14000.0000 14500.0000	Т	Horizontal and Vertical	200KG7D	44.3	27.3		
E50. Modulation entirety.)  DIGITAL PS		28 KSPS, RETURN		in this box, picuse g	s to the end of the	e form to view it in its		
TFTR 98CM	14000.0000 14500.0000	Т	Horizontal and Vertical	400KG7D	44.3	24.3		
E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its ntirety.)  DIGITAL PSK, DIGITAL, 256 KSPS, RETURN CARRIER								

TFTR 98CM	14000.0000	T	Horizontal and	800KG7D	44.3	21.3
	14500.0000		Vertical			

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

DIGITAL PSK, DIGITAL, 512 KSPS, RETURN CARRIER

TFTR 98CM	14000.0000	T	Horizontal and	1M60G7D	44.3	18.3
	14500.0000		Vertical			

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

DIGITAL PSK, DIGITAL, 1024 KSPS, RETURN CARRIER

## FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	Range of Satellite Arc Eastern/West	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	Station Azimuth Angle	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
TFTR 98CM	Geostationary	11700.0000 12200.0000	62.0/143.0	0.0	5.0	0.0	5.0	0.0

	Geostationary	14000.0000 14500.0000	62.0/143.0	0.0	5.0	0.0	5.0	-2.5
REMOTE CON	NTROL POIN	T LOCATION	•	•	•		•	•
E61. Call Sign E940460 NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.				E66. Phone N 702–271–60				
E62. Street A One Aerojet V								
E63. City North Las Veg	gas		E68. Coun Clark	ty		E67/68. State/Count NV/	try USA	E64. Zip Code 89030
E61. Call Sign E000166 NOTE: Please callsign for whice	e enter the calls	ign of the contro		ot the	E66. Phone N 301–428–55			
E62. Street Ac 11717 Explor				'				
E63. City Germantown			E68. Coun Montgome	-		E67/68. State/Count MD/	try USA	E64. Zip Code 20876

# SATELLITE EARTH STATION AUTHORIZATIONS FCC Form 312 – Schedule B:(Technical and Operational Description) FOR OFFICIAL USE ONLY

Location of Earth St	ation Site				
E1: Site Identifier:	TR 98CM	E5. Call Sign:	E940460		
E2: Contact Name	David Fahey	E6. Phone Number:	702-271-6048		
E3. Street:	One Aerojet Way	E7. City:	North Las Vegas		
		E8. County:	Clark		
E4. State	NV	E9. Zip Code	89030		
E10. Area of Operat	tion:	CONUS, AK, HI, V	I, PR		
E11. Latitude:	0 °0 '0.0 "N				
E12. Longitude:	0 °0 '0.0 "W				
E13. Lat/Lon Coordinates are:		<b>○</b> NAD-27	NAD-83	O 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.	O Yes	<b>⊚</b> No	O 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?	O Yes	O No	<b>⊚</b> N/A

E17. Is the facility operated by remote control? If YES, provide the point.	location and telephone number of the control	Yes	O No	
E18. Is frequency coordination required? If YES, attach a frequency	y coordination report as	O Yes	No	
E19. Is coordination with another country required? If YES, attach coordination contours as	the name of the country(ies) and plot of	O Yes	No	
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part have you attached a copy of a completed FCC Form 854 and/or the the structure to aviation?  FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WIAPPLICATION.	FAA's study regarding the potential hazard of	O Yes	No	
POINTS OF COMMUNICATION				
Satellite Name: AMC-4 (formerl GE-4   AMC-4   101 W.L. If y	ou selected OTHER, please enter the following:			
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
Satellite Name: INTELSAT AMERICAS 5   USASAT-24D   97 W.	L. If you selected OTHER, please enter the following	llowing:		
E21. Common Name:	E22. ITU Name:			
E23. Orbit Location:	E24. Country:			
	•			
Satellite Name: HORIZONS 1   HORIZONS 1   127 DEG WL If	you selected OTHER, please enter the following	:		

E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: IA-8   IA-8   89 W.L. If you selected OTHER, please	enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: AMSC-9   AMERICOM 9   85 W.L. If you selected O	THER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: SATMEX 6   SATMEX 6   113 W.L. If you selected O	THER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: SATMEX 6   SATMEX 6   113 W.L. If you selected O	THER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: GALAXY 4R   GALAXY 4R   99 W.L. If you selected	d OTHER, please enter the following:
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
Satellite Name: GALAXY XI   GALAXY XI   91 W.L. If you selected	OTHER, please enter the following:

E21. Common Name:	E22. ITU Name:					
E23. Orbit Location:	E24. Country:					
Satellite Name: SATMEX-5   SATMEX-5   116.8 W.L. If you selected OTHER, please enter the following:						
E21. Common Name:	E22. ITU Name:					
E23. Orbit Location:	E24. Country:					
Satellite Name: GALAXY 10R   GALAXY 10R   123 W.L. If	f you selected OTHER, please enter the following:					
	<u> </u>					
E21. Common Name:	E22. ITU Name:					
E23. Orbit Location:	E24. Country:					
Satellite Name: AMC-3   AMC-3   87 W.L. If you selected C	OTHER, please enter the following:					
E21. Common Name:	E22. ITU Name:					
E23. Orbit Location:	E24. Country:					
Satellite Name: SATMEX 6   SATMEX 6   113 W.L. If you see	elected OTHER, please enter the following:					
E21. Common Name:	E22. ITU Name:					
E23. Orbit Location:	E24. Country:					
Satellite Name: AMC-6   AMC-6   72 W.L. If you selected C	OTHER, please enter the following:					
E21. Common Name:	E22. ITU Name:					
E23. Orbit Location:	E24. Country:					
	•					
Satellite Name: GALAXY III-C   GALAXY III-C   95 W.L.	If you selected OTHER, please enter the following:					

E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
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	Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)
TR 98CM	TR 98CM	60000	Prodelin	3981–226	0.98	39.9 dBi at 11.9500
TR 98CM	TR 98CM	60000	Prodelin	3981–226	0.98	41.3 dBi at 14.2500

Id	Diameter		, ,	Height Above Ground Level	Input Power at	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
TR 98CM	0.0/0.0	0.0	0.0	0.0	2.0	0.0	44.3

## FREQUENCY

	r Carrier   ERIP Dei	nsity per
$\begin{array}{ c c c c c }\hline (MHz) & & & & & & & & & & \\\hline (dBW) & & & & & & & & & \\\hline \end{array}$	Carrier (dBW/4k)	ша)

TR 98CM	11700.0000 12200.0000	R	Horizontal and Vertical	24M0G7D	0.0	0.0		
E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)								
DIGITAL PSK, DATA, 20 MSPS, MULTIMEDIA BROADCAST CARRIER								
TR 98CM	11700.0000 12200.0000	R	Horizontal and Vertical	36M0G7D	0.0	0.0		
E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)  DIGITAL PSK, DATA, 30 MSPS, MULTIMEDIA BROADCAST CARRIER								
TR 98CM	14000.0000 14500.0000	Т	Horizontal and Vertical	200KG7D	44.3	27.3		
E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)  DIGITAL PSK, DIGITAL, 128 KSPS, RETURN CARRIER								

TR 98CM	14000.0000 14500.0000	Т	Horizontal and Vertical	400KG7D	44.3	24.3
E50. Modula entirety.)	tion and Services (l	f the complete d	escription does not appear	in this box, please	go to the end of the	he form to view it in its
DIGITAL	PSK, DIGITAL,	256 KSPS, R	ETURN CARRIER			
TR 98CM	14000.0000 14500.0000	Т	Horizontal and Vertical	800KG7D	44.3	21.3
TR 98CM	14000.0000 14500.0000	Т	Horizontal and Vertical	1M60G7D	44.3	18.3
E50. Modula entirety.)	tion and Services (l	f the complete d	escription does not appear	in this box, please	go to the end of the	he form to view it in its
DIGITAL	PSK, DIGITAL,	1024 KSPS,	RETURN CARRIER			

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)		E56. Earth Station Azimuth Angle Eastern Limit	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)
TR 98CM	Geostationary	11700.0000 12200.0000	62.0/143.0	0.0	5.0	0.0	5.0	0.0
	Geostationary	14000.0000 14500.0000	62.0/143.0	0.0	5.0	0.0	5.0	-2.5

## REMOTE CONTROL POINT LOCATION

E61. Call Sign E000166 NOTE: Please enter the callsign of the contro callsign for which this application is being filed.	_	E66. Phone Number 301–428–5500		
E62. Street Address 11717 Exploration Lane				
E63. City	E68. County		E67/68.	E64. Zip Code
Germantown	Montgomery		State/Country MD/ USA	20876

E66. Phone Number
702-271-6048

E62. Street Address One Aerojet Way			
E63. City North Las Vegas	E68. County Clark	E67/68. State/Country NV/ USA	E64. Zip Code 89030

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