



**UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION**

RADIO STATION AUTHORIZATION

Name: HNS License Sub, LLC

Call Sign: E060382

Authorization Type: Modification of License

File Number: SES-MOD-20170414-00531

Non Common Carrier

Grant date: 06/21/2017

Expiration Date: 03/06/2022



Nature of Service: Fixed Satellite Service

Class of Station: Fixed Earth Stations

A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)	BV-1	394 N. EXPRESSWAY (1.8M.) KVEO-TV BROWNSVILLE, CAMERON, TX 78521	25°55'38.0"N	97°29'25.0"W	17.1	83
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209				
2)	Castle Rock 2	5281 EAST GARTON ROAD (9.2M.) CASTLE ROCK, DOUGLAS, CO 89101	39°16'34.3"N	104°48'29.6"W	2096.2	83
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209				
3)	Castle Rock Station	5281 EAST GARTON ROAD (9.0M.) CKa11 CASTLE ROCK, DOUGLAS, CO 80104	39°16'34.3"N	104°48'39.0"W	2096.2	83
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209				
4)	NLV-1	ONE AEROJET WAY (1.8M.) NORTH LAS VEGAS, CLARK, NV 89030	36°14'11.7"N	115°7'4.1"W	583.1	83
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209				
5)	NLV-2	1500 FOREMASTER LANE (1.8M.) KSNV-SOUTHERN LAS VEGAS, CLARK, NV 89101	36°11'8.0"N	115°7'38.0"W	573	83
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209				

Subject to the provisions of the Communications Act of 1934, The Communications Satellite Act of 1962, subsequent acts and treaties, and all present and future regulations made by this Commission, and further subject to the conditions and requirements set forth in this license, the grantee is authorized to construct, use and operate the radio facilities described below for radio communications for the term beginning March 6, 2007 (3 AM Eastern Standard Time) and ending March 6, 2022 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is June 21, 2018 (3 AM Eastern Standard Time). Grantee must file with the Commission a certification upon completion of construction and commencement of operation.



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B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands.
 The General Provision 1900 applies to all transmitting frequency bands.
 For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarization Code	Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
1)	29998.0000-29998.0000	L, R	NON	Tx	63.00	53.00	BEACON 1		UNMODULATED CARRIER
2)	29500.0000-29535.0000	H, V	NON	Tx	56.30	35.30	CKa11		Beacon
3)	29500.0000-29515.0000	H, V	1M30F9D	Tx	56.30	35.30	CKa11		Command Carriers and Ranging
4)	29500.0000-29515.0000	H, V	600KF9D	Tx	56.30	35.30	CKa11		Command Carriers and Ranging
5)	29500.0000-29515.0000	H, V	944KF9D	Tx	56.30	35.30	CKa11		Command Carriers and Ranging
6)	19700.0000-19706.0000	H, V	106KG7D	Rx			CKa11		Telemetry and Ranging
7)	28351.0000-28353.0000	L, R	1M00F2D	Tx	69.70	45.70	CR 2		FM CMD & RANGING
8)	20199.5000-20199.5000	H, V, L, R	NON	Rx			CR 2		BEACON
9)	19700.5000-19702.5000	H, V, L, R	200KG7W	Rx			CR 2		TELEMETRY AND RANGING
10)	19700.5000-19702.5000	H, V, L, R	300KG7W	Rx			CR 2		TELEMETRY AND RANGING
11)	19700.5000-19702.5000	H, V, L, R	70K0G7W	Rx			CR 2		TELEMETRY AND RANGING
12)	29998.0000-29998.0000	L, R	NON	Tx	63.00	53.00	NLV-1		UNMODULATED CARRIER
13)	29998.0000-29998.0000	L, R	NON	Tx	63.00	53.00	NLV-2		UNMODULATED CARRIER

C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.)		Elevation (Degrees)		Azimuth (Degrees)		Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
1)	29500.0000-29535.0000	89.0W	95.0W	41.7	43.4	155.9	164.7	-5	CKa11
2)	19700.0000-19706.0000	89.0W	95.0W	41.7	43.4	155.9	164.7		CKa11
3)	29998.0000-29998.0000	80.0W	120.0W	34.1	47.6	130.0	188.2	-5.7	NLV-1
4)	19700.5000-20199.5000	80.0W	120.0W	34.1	47.6	130.0	188.2		NLV-1
5)	28351.0000-28353.0000	80.0W	120.0W	34.1	47.6	130.0	188.2		NLV-1
6)	29998.0000-29998.0000	80.0W	120.0W	34.1	47.7	130.0	188.2	-5.7	NLV-2
7)	19700.5000-20199.5000	80.0W	120.0W	34.1	47.7	130.0	188.2		NLV-2



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C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.)		Elevation (Degrees)		Azimuth (Degrees)		Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		
8)	28351.0000-28353.0000	80.0W	-120.0W	34.1	-47.7	130.0	-188.2		NLV-2
9)	28351.0000-28353.0000	80.0W	-120.0W	37.8	-41.9	143.9	-203.2	-28	CR 2
10)	19700.5000-20199.5000	80.0W	-120.0W	37.8	-41.9	143.9	-203.2		CR 2
11)	29998.0000-29998.0000	80.0W	-120.0W	54.0	-50.7	144.2	-223.5	-9.4	BEACON 1
12)	19700.5000-20199.5000	80.0W	-120.0W	54.0	-50.7	143.9	-223.5		BEACON 1
13)	28351.0000-28353.0000	80.0W	-120.0W	54.0	-50.7	143.9	-223.5		BEACON 1

D) Points of Communications

The following stations located in the Satellite orbits consistent with Sections B and C of this Entry:

- 1) Castle Rock Station to IA-8 Intelsat Americas satellite @ 89 degrees W.L., of the INTELSAT system (U.S.-licensed)
- 2) Castle Rock Station to SPACEWAY 3 satellite @ 95 degrees W.L.
- 3) Castle Rock Station to SPACEWAY 3 satellite @ 94.95 degrees W.L.
- 4) NLV-1 to AMC 16 (S2181) @ 85 degrees W.L. (U.S.-licensed)
- 5) NLV-1 to Echostar XVII (S2753) @ 107.1 WL (U.S. licensed satellite)
- 6) NLV-1 to AMC-15 (S2180) @ 105 degrees W.L.(U.S.-licensed)
- 7) NLV-1 to GALAXY 28 (S2160) @ 89 degrees W.L. (U.S.-licensed)
- 8) NLV-1 to Echostar XVII (S2753) @ 107.1 WL (U.S. licensed satellite)
- 9) NLV-2 to AMC-15 (S2180) @ 105 degrees W.L.(U.S.-licensed)
- 10) NLV-2 to Echostar XVII (S2753) @ 107.1 WL (U.S. licensed satellite)
- 11) NLV-2 to GALAXY 28 (S2160) @ 89 degrees W.L. (U.S.-licensed)
- 12) NLV-2 to AMC 16 (S2181) @ 85 degrees W.L. (U.S.-licensed)
- 13) NLV-2 to Echostar XVII (S2753) @ 107.1 WL (U.S. licensed satellite)
- 14) Castle Rock 2 to AMC 16 (S2181) @ 85 degrees W.L. (U.S.-licensed)
- 15) Castle Rock 2 to Echostar XVII (S2753) @ 107.1 WL (U.S. licensed satellite)
- 16) Castle Rock 2 to GALAXY 28 (S2160) @ 89 degrees W.L. (U.S.-licensed)
- 17) Castle Rock 2 to Echostar XVII (S2753) @ 107.1 WL (U.S. licensed satellite)
- 18) Castle Rock 2 to AMC-15 (S2180) @ 105 degrees W.L.(U.S.-licensed)
- 19) BV-1 to AMC 16 (S2181) @ 85 degrees W.L. (U.S.-licensed)
- 20) BV-1 to Echostar XVII (S2753) @ 107.1 WL (U.S. licensed satellite)
- 21) BV-1 to GALAXY 28 (S2160) @ 89 degrees W.L. (U.S.-licensed)
- 22) BV-1 to Echostar XVII (S2753) @ 107.1 WL (U.S. licensed satellite)
- 23) BV-1 to AMC-15 (S2180) @ 105 degrees W.L.(U.S.-licensed)



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D) Points of Communications

The following stations located in the Satellite orbits consistent with Sections B and C of this Entry:

24) BV-1 to Echostar XVII (S2753) @ 107.1 WL (U.S. licensed satellite)

E) Antenna Facilities

Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
BV-1	BEACON 1	1	1.8	PRODELIN	1.8 METER KA-BAND	17.1	3 AGL/ 20.1 AMSL	
Max Gains(s):		49.2 dBi @	20.0000 GHz	52.4 dBi @	30.0000 GHz			
Maximum total input power at antenna flange (Watts) =						11.40		
Maximum aggregate output EIRP for all carriers (dBW) =						63.00		
Castle Rock Station	CKa11	1	9	VERTEX/GENERAL DYNAMICS	9M THX/Ka	2096.2	10 AGL/ 2106 AMSL	
Max Gains(s):		62.6 dBi @	20.0000 GHz	67.0 dBi @	29.5000 GHz			
Maximum total input power at antenna flange (Watts) =						400.00		
Maximum aggregate output EIRP for all carriers (dBW) =						93.00		
Castle Rock	CR 2	1	9.2	GDSATCOM TECHNOLOGIES	9.2 METER KA-BAND	2096.2	5.49 AGL/ 2101.72 AMSL	
Max Gains(s):		63.2 dBi @	20.0000 GHz	66.3 dBi @	30.0000 GHz			
Maximum total input power at antenna flange (Watts) =						2.20		
Maximum aggregate output EIRP for all carriers (dBW) =						69.70		
NLV-1	NLV-1	1	1.8	PRODELIN	1.8 METER KA-BAND	583.1	3 AGL/ 586.1 AMSL	
Max Gains(s):		49.2 dBi @	20.0000 GHz	52.4 dBi @	30.0000 GHz			
Maximum total input power at antenna flange (Watts) =						11.30		
Maximum aggregate output EIRP for all carriers (dBW) =						63.00		
NLV-2	NLV-2	1	1.8	PRODELIN	1.8 METER KA-BAND	573	3 AGL/ 576 AMSL	
Max Gains(s):		49.2 dBi @	20.0000 GHz	52.4 dBi @	30.0000 GHz			
Maximum total input power at antenna flange (Watts) =						11.30		
Maximum aggregate output EIRP for all carriers (dBW) =						63.00		



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F) Remote Control Point:

BV-1	ONE AEROJET WAY, (1.8M.) KVEO-TV NORTH LAS VEGAS, CLARK, NV 89030 301-428-7205	Call Sign: N/A
Castle Rock Station	11717 EXPLORATION LANE GERMANTOWN, MONTGOMERY, MD 20876 3014287205	Call Sign:
NLV-2	ONE AEROJET WAY, (1.8M.) KSNV-SOUTHERN NORTH LAS VEGAS, CLARK, NV 89030 301-428-7205	Call Sign: N/A

G) Antenna Structure marking and lighting requirements:

None unless otherwise specified under Special and General Provisions

H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

- 4 --- Licensee must ensure that a current listing of the name, title, mailing address, email address, and telephone number of the responsible point of contact are on file at the FCC. Any changes must be filed electronically in the International Bureau Filing System (IBFS) in the "Other Filings" tab within 10 days of the change.
- 5 --- Licensee must notify the Commission when an earth station is no longer operational or when it has not been used to provide any service during any 6-month operation.
- 6 --- Licensee must comply with the license modification and notification requirements of 47 CFR § 25.118 to change the coordinates of its authorized earth station.

2300 --- Authority is granted to operate this station by remote control provided that: (1) the parameters of the transmissions of this station monitored at the remote control point, and the operational functions sufficient to ensure that the operations of this station are in full compliance with the station authorization at all times; (2) upon detection by the grantee, or upon notification from the Commission, of a deviation of the operation of this station, transmissions shall be immediately suspended until the deviation is corrected, except that transmissions concerning the immediate safety of life or property may be conducted for the duration of such emergency; and (3) the grantee shall have available, at all times, the technical personnel necessary to perform the technical servicing and maintenance of this station expeditiously. See also Public Notice "The International Bureau Provides Guidance Concerning the Relocation of Earth Station Remote Control Points", DA 06-978 (rel. May 4, 2006).



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H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:

9662 --- The 17.8 - 20.2 GHz band is shared with U.S. Government space stations and associated earth stations in the fixed-Satellite Services. Services within the United States over the satellite network of which this is a cooperating earth station are subject to coordination under US334 and operation of the earth station(s) authorized herein will be subject to any technical constraints resulting from this coordination. See 47 C.F.R. Section 2.106, Footnote US334.

90398 --- Changes to previously authorized transmitting facilities, operations and devices regulated by the Commission that may have significant environmental impact, and are not excluded by §1.1306, require the preparation of an Environmental Assessment (EA) by the licensee. (see 47 C.F.R. §§1.1307, 1.1308 and 1.1311)

90399 --- The licensee shall, at all times, take all necessary measures to ensure that operation of this (these) authorized earth station(s) 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. Physical 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.



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B) This RADIO STATION AUTHORIZATION is granted subject to the additional conditions specified below:

This authorization is issued on the grantee's representation that the statements contained in the application are true and that the undertakings described will be carried out in good faith.

This authorization shall not be construed in any manner as a finding by the Commission on the question of marking or lighting of the antenna system should future conditions require. The grantee expressly agrees to install such marking or lighting as the Commission may require under the provisions of Section 303(q) of the Communications Act. 47 U.S.C. § 303(q).

Neither this authorization nor the right granted by this authorization shall be assigned or otherwise transferred to any person, firm, company or corporation without the written consent of the Commission. This authorization is subject to the right of use or control by the government of the United States conferred by Section 706 of the Communications Act. 47 U.S.C. § 706. Operation of this station is governed by Part 25 of the Commission's Rules. 47 C.F.R. Part 25.

This authorization shall not vest in the licensee any right to operate this station nor any right in the use of the designated frequencies beyond the term of this license, nor in any other manner than authorized herein.

This authorization is issued on the grantee's representation that the station is in compliance with environmental requirements set forth in Section 1.1307 of the Commission's Rules. 47 C.F.R. § 1.1307.

This authorization is issued on the grantee's representation that the station is in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules. 47 C.F.R. § 17.4.

The following condition applies when this authorization permits construction of or modifies the construction permit of a radio station.

This authorization shall be automatically forfeited if the station is not ready for operation by the required date of completion of construction unless an application for modification of authorization to request additional time to complete construction is filed by that date, together with a showing that failure to complete construction by the required date was due to factors not under control of the grantee.

Licensees are required to pay annual regulatory fees related to this authorization. The requirement to collect annual regulatory fees from regulatees is contained in Public Law 103-66, "The Omnibus Budget Reconciliation Act of 1993." These regulatory fees, which are likely to change each fiscal year, are used to offset costs associated with the Commission's enforcement, public service, international and policy and rulemaking activities. The Commission issues a Report and Order each year, setting the new regulatory fee rates. Receive only earth stations are exempt from payment of regulatory fees.