E150086 SES-STA-20160115-00057 IB2016000143
HNS License Sub, LLC

Approved by OMB
3060–0678

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATIONEnter a description of this application to identify it on the main menu:
STA request to test gateway Earth station in Lindon, UT

1. Applicant

Name:	HNS License Sub, LLC	**Phone Number:**	301–428–5893
DBA Name:		**Fax Number:**	301–428–2818
Street:	11717 Exploration Lane	**E–Mail:**	jennifer.manner@echostar.com
City:	Germantown	**State:**	MD
Country:	USA	**Zipcode:**	20876 –
Attention:	Jennifer Manner		

GRANTED
International Bureau

File # SES-STA-20160115-00057
E150086
Call Sign (or other identifier) Grant Date 2-2-16
Term Dates
From: 3-31-16 To: 4-30-16
Approved:

Applicant: HNS License Sub, LLC
Call Sign: E150086
File No.: SES-STA-20160115-00057
Special Temporary Authority (STA)

GRANTED
International Bureau

File # SES-STA-20160115-00057
Call Sign E150086 Grant Date 2-12-16
(or other identifier)
Term Dates
From: 3-31-16 To: 4-30-16
Approved: Karl E Kreas

HNS License Sub, LLC is granted a Special Temporary Authority for 30 days beginning March 31, 2016, to use its Lindon, UT, Ka-band earth station, to communicate with: the AMC-15 satellite (call sign S2180) at orbital location 105° W. L. Primary satellite; the EchoStar XVII (Jupiter 1) satellite (call sign S2753) at 107.1° W.L. orbital location; the AMC-16 satellite (call sign S2181) at 85° W.L. orbital location; the EchoStar IX satellite (call sign S2179) at 121° W.L. orbital location; the Galaxy 28(nee IA-8) S2160/Telstar 8(IA-8) S2205 at 89°W.L. orbital location; and ViaSat-1 satellite (call sign S2747) at 115° W.L. orbital location to test gateway Earth station to provide advanced broadband satellite services under the following conditions:

1. Operations are restricted to center frequency 29.9375 GHz (Earth-to-space) within coordinated emission and power limits and on 19.7 – 20.2 GHz (space-to-Earth) frequency band.

2. All operations under this grant of STA shall be on an unprotected and non-harmful interference basis. HNS License Sub, LLC- shall not cause harmful interference to, and shall not claim protection from interference by any other lawfully operating radio communication system.

3. Grant of this STA is without prejudice to any determination that the Commission may make regarding pending or future HNS License Sub, LLC applications.

4. Any action taken or expense incurred as a result of operations pursuant to this STA is solely at HNS License Sub, LLC's risk.

5. The 17.8-20.2 GHz band is shared with U.S. Government space stations and associated earth stations in the Fixed-Satellite Service. The satellite network of which this is a cooperating earth station is subject to coordination under US334 and operation of this earth station will be subject to any technical constraints resulting from this coordination.

This grant is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective upon release.

2. Contact

Name:	Jennifer A. Manner	**Phone Number:**	301–428–5893
Company:	HNS License Sub, LLC	**Fax Number:**	301–428–2818
Street:	11717 Exploration Lane	E–Mail:	jennifer.manner@echostar.com
City:	Germantown	**State:**	MD
Country:	USA	**Zipcode:**	20876 –
Attention:		**Relationship:**	

(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)
3. Reference File Number SESLIC2015060400342 or Submission ID

4a. 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):

4b. Fee Classification CGX – Fixed Satellite Transmit/Receive Earth Station

5. Type Request

◉ Use Prior to Grant ○ Change Station Location ○ Other

6. Requested Use Prior Date 03/31/2016	
7. CityLindon	8. Latitude (dd mm ss.s h) 40 49 57.0 N

9. State UT	10. Longitude (dd mm ss.s h) 111 43 40.8 W

11. Please supply any need attachments.

Attachment 1: Narrative Attachment 2: Technical Data Attachment 3:

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

30 Day STA request to test gateway Earth station in Lindon, UT for Jupiter 2 (EchoStar XIX). See attached narrative.

13. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes.

(●) Yes ( ) No

14. Name of Person Signing Alexander Gerdenitsch	15. Title of Person Signing Senior Principal Engineer, 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).

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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.

Request for Special Temporary Authority

Pursuant to Section 25.120(b)(4),[1] HNS License Sub, LLC (Hughes) requests special temporary authority (STA) for a period of 30 days starting on March 31, 2016 to test a fixed Earth station in Lindon, UT.[2] Grant of this STA serves the public interest as Hughes needs to run time sensitive testing of new gateway Earth stations to ensure that they are properly installed.

The Earth station which we are seeking STA authority for testing will be used as one of the gateways for the Jupiter 2 (EchoStar XIX) satellite network.[3] The application for permanent authority for this Earth station was granted on December 2, 2015.[4]

Grant of this STA is in the public interest because it will enable Hughes to test the antenna of this Earth station upon installation. This test will enable Hughes to ensure that the earth station antenna is properly installed and can successfully operate with the Jupiter 2 satellite. Hughes agrees to perform this test on a non-interference basis. Accordingly, there is no interference concern. In addition, testing will only occur at 29937.5 MHz within the frequency range where Fixed Satellite Services operate on a primary basis (29.5 GHz to 30.0 GHz). The receive frequency range is 19.7-20.2 GHz.

For purposes of this STA, Hughes requests authority for the Earth station to communicate with the AMC-15 satellite at 105° W.L. (call sign S2180). This is the primary satellite that Hughes will transmit to for the testing purposes. Hughes' testing may require the Earth station to transmit to the:

- EchoStar XVII (Jupiter 1) satellite at 107.1 W.L. (call sign S2753),
- AMC-16 satellite at 85° W.L. (call sign S2181),
- EchoStar IX satellite at 121° W.L. (call sign S2179),
- Galaxy 28 (nee IA-8) S2160/Telstar 8(IA-8) S2205 at 89°W.L, and
- ViaSat-1 satellite at 115° W.L. (call sign S2747)

Accordingly, Hughes requests special temporary authority to transmit to those satellites as well. The location data and technical parameters for the testing are provided in Attachment 1 provided with the application.

For the reasons stated herein, Hughes request that the Commission grant the STA request.

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[1] 47 C.F.R. § 25.120(b)(4).

[2] While an STA is being requested for 30 days, testing is planned to occur over short time period within the 30 days.

[3] The FCC has authorized the Jupiter 2 (EchoStar XIX) satellite at 97.1° W.L. to access the U.S. market. *See* IBFS File Nos. SAT-LOI-20110809-00148 (granted Jul 27, 2012) and SAT-MOD-20141201-00127 (granted Jun. 23, 2015). The Jupiter 2 satellite is a next generation satellite, which will provide increased capacity for Hughes' satellite broadband services.

[4] *See* IBFS File No. SES-LIC-20150604-00342.

HNS License Sub, LLC
Attachment 1

Technical Data for Special Temporary Authority Request

Location (City, State, Coordinates)	Lindon, UT Latitude: 40° 19' 57.0" N Longitude: 111° 43' 40.8" W
Site Elevation	1404.2 meters
Antenna Diameter	5.6m
Height Above the Ground	5.8m
Antenna Gain Transmit	61.9 dB
Antenna Gain Receive	61.9 dB
Total Input Power at antenna flange	Up to 6 dBW (4 watts)
Total EIRP for all carries (dBW)	67.9 dBW
Transmit Frequency Range	29.9375 GHz
Receive Frequency Range	19.7-20.2 GHz
Transmit antenna polarization	Left Hand Circular
Receive antenna polarization	Right Hand Circular
Maximum Bandwidth	4kHz
Maximum EIRP per carrier (dBW)	67.9 dBW
Maximum EIRP Density per Carrier (dBW/4kHz)	67.9 dBW/4kHz
Transmit Modulation	Continuous Wave (CW)
Receive Modulation	Continuous Wave (CW)
Range of Satellite Arc E/W Limit	85° W.L to 121° W.L.
Earth Station Azimuth Angle Eastern Limit	142.1°
Antenna Elevation Angle Eastern Limit	35.9°
Earth Station Azimuth Angle Western Limit	194.2°
Antenna Elevation Angle Western Limit	42.4°
Maximum EIRP Density toward the Horizon	-0.88 dBW/4kHz
Will the tests be operated by remote?	No