

S3017 SAT-MOD-20190212-00011 IB2019000315
Hughes Network Systems, LLC
ECHOSTAR XXIV



File # SAT-MOD-20190212-00011
Call Sign S3017 Grant Date 06/13/19
(or other identifier)
From see conditions Term Dates see conditions
To: conditions
Approved: *Stephen J. Duall*

Approved by OMB
3060-0678

Date & Time Filed: Feb 12 2019 4:50:15:606PM
File Number: SAT-MOD-20190212-00011

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:
Modification of EchoStar XXIV to add spectrum bands and orbital debris plan

1-8. Legal Name of Applicant


Name:	Hughes Network Systems, 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 A Manner		

ATTACHMENT TO GRANT

Hughes Network Systems, LLC

IBFS File Nos. SAT-LOA-20170621-00092; SAT-AMD-20170908-00128;

SAT-MOD-20190212-00011

IBFS File No(s):	SAT-LOA-20170621-00092 SAT-AMD-20170908-00128 SAT-MOD-20190212-00011	<p align="center">GRANT With Conditions</p>  <p align="center">International Bureau Satellite Division</p>
Licensee/Grantee:	Hughes Network Systems, LLC (Hughes)	
Call Sign:	S3017	
Satellite Name:	EchoStar XXIV (also known as HNS-95W or Jupiter 3)	
Orbital Location: (required station-keeping tolerance)	95.2° W.L. (+/- 0.05 degrees east-west station-keeping)	
Administration:	United States of America	
Nature of Service:	Fixed-Satellite Service (FSS)	
Scope of Grant:	Modification of authorization for EchoStar XXIV to: (1) operate using the 18.8-19.3 GHz band for service in the United States; and (2) operate in additional frequencies at 28.6-29.1 GHz. Grant of Hughes's previously deferred request for operations in the 50.4-51.4 GHz frequency band.	
Previous Grant(s):	Grant of authority to construct, deploy, and operate a geostationary orbit (GSO) space station providing fixed-satellite service. Deferral of consideration of Hughes's request for operations in the 50.4-51.4 GHz frequency band and associated waiver. IBFS File Nos. SAT-LOA-20170621-00092 and SAT-AMD-20170908-00128 (granted in part, deferred in part, Mar. 20, 2018) ¹	
Service Area(s):	North, South, and Central America. <i>See</i> IBFS File Nos. SAT-AMD-20170908-00128, Schedule S Tech Report, HNS 95W isoline contour .gxt, and SAT-MOD-20190212-00011, Schedule S Tech Report.	
Frequencies:	18.3-18.8 GHz (space-to-Earth) 18.8-19.3 GHz (space-to-Earth) 19.7-20.2 GHz (space-to-Earth) 27.5-28.0 GHz (Earth-to-space) 28.1-28.6 GHz (Earth-to-space) 28.6-29.1 GHz (Earth-to-space) 29.3-29.9 GHz (Earth-to-space) 29.992-29.996 GHz (Earth-to-space) 40.0-42.0 GHz (space-to-Earth) 47.2-50.2 GHz (Earth-to-space) 50.4-51.4 GHz (Earth-to-space) Telemetry, tracking, & command (TT&C) center frequencies: 20.197 GHz (space-to-Earth) 20.199 GHz (space-to-Earth) 29.993 GHz (Earth-to-space) 29.995 GHz (Earth-to-space)	

¹ We note that in Condition 18 of the original license grant, the Satellite Division required Hughes to provide an updated orbital debris mitigation plan. *See* IBFS File Nos. SAT-LOA-20170621-00092 and SAT-AMD-20170908-00128. In its modification application, Hughes has satisfied this condition by filing an updated orbital debris mitigation plan consistent with Section 25.114(d)(14)(i)-(iv) of the Commission's rules, 47 CFR § 25.114(d)(14)(i)-(iv). *See* IBFS File No. SAT-MOD-20190212-00011, Attachment A, Technical Annex.

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Unless otherwise specified herein, operations under this grant must comport with the legal and technical specifications set forth by the applicant or petitioner and with Federal Communication Commission's rules not waived herein. This grant is also subject to the following conditions:

1. Hughes must prepare the necessary information, as may be required, for submission to the International Telecommunication Union (ITU) to initiate and complete the advance publication, coordination, due diligence, and notification process of this space station, in accordance with the ITU Radio Regulations. Hughes will be held responsible for all cost-recovery fees associated with ITU filings. No protection from interference caused by radio stations authorized by other administrations is guaranteed unless coordination and notification procedures are timely completed or, with respect to individual administrations, coordination agreements are successfully completed. Any radio station authorization for which coordination has not been completed may be subject to additional terms and conditions as required to effect coordination of the frequency assignments of other administrations. *See* 47 CFR § 25.111.
2. In connection with the provision of service in any particular country, Hughes is obliged to comply with the applicable laws, regulations, rules, and licensing procedures of that country.
3. Hughes must operate the EchoStar XXIV space station at the 95.2° W.L. orbital location in compliance with all existing or future coordination agreements for this location.
4. Hughes must maintain the EchoStar XXIV space station within an east/west longitudinal station-keeping tolerance of +/- 0.05 degrees of the 95.2° W.L. orbital location.
5. Operations of the EchoStar XXIV space station and associated earth stations must comport with the applicable uplink and downlink limits in 47 CFR § 25.140(a)(3) of the Commission's rules, unless Hughes coordinates any non-conforming operations with the operations of U.S.-licensed geostationary orbit space stations within 6 degrees of the 95.2° W.L. orbital location. Non-conforming operation must also be coordinated with respect to those operations of non-U.S.-licensed space stations within 6 degrees of 95.2° W.L. involving approved communications with U.S.-licensed earth stations.
6. Operations in the 18.3-19.3 GHz and 19.7-20.2 GHz frequency bands must complete coordination with U.S. Federal systems, in accordance with footnote US334 to the United States Table of Frequency Allocations, 47 CFR § 2.106, prior to being used. Operations in the 18.3-19.3 GHz and 19.7-20.2 GHz bands must be in accordance with any signed coordination agreement reached between Hughes and U.S. Federal operators. Two weeks prior to the start of any operations in the 18.3-19.3 GHz or 19.7-20.2 GHz bands, Hughes must provide contact information for a 24/7 point of contact for the resolution of any harmful interference to Jimmy Nguyen, Email: Jimmy.Nguyen@us.af.mil.
7. The power flux-density (PFD) at the Earth's surface produced by the emissions from the EchoStar XXIV space station, in the 18.3-19.3 GHz, 19.7-20.2 GHz, and 40.0-42.0 GHz frequency bands (space-to-Earth), must not exceed the applicable power flux-density limits contained in Sections 25.138(a)(6), 25.140(a)(3)(iii), and 25.208, and in Article 21 of the ITU Radio Regulations.
8. Operations of the EchoStar XXIV space station in the 18.8-19.3 GHz (space-to-Earth) and 28.6-29.1 GHz (Earth-to-space) frequency bands must not cause harmful interference to, or claim interference protection from, primary NGSO FSS systems licensed in the United States. Hughes must terminate operations immediately upon notification of harmful interference.
1. No later than sixty days before the scheduled initial launch of each NGSO FSS satellite system licensed in the United States to operate in the 18.8-19.3 GHz (space-to-Earth) and 28.6-29.1 GHz (Earth-to-space) frequency bands, Hughes must either: (1) notify the Commission in writing when an agreement has been reached with the NGSO satellite system operator, or (2) seek and obtain the Commission's approval of a modification of this license including detailed technical demonstrations of how Hughes will protect the NGSO FSS satellite system. If neither condition is met, Hughes must cease operations in the 18.8-19.3

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GHz and 28.6-29.1 GHz frequency bands pursuant to this license until such time as compliance is demonstrated.² With respect to any NGSO FSS system licensed or granted market access in the United States that commences operations prior to the scheduled launch of EchoStar XXIV, Hughes must comply with either (1) or (2) above and must not commence operations in the 18.8-19.3 GHz and 28.6-29.1 GHz frequency bands pursuant to this license until such time as compliance is demonstrated.

9. Operations of the EchoStar XXIV space station in the 27.5-28.35 GHz (Earth-to-space) frequency band are secondary with respect to Upper Microwave Flexible Use Service (UMFUS) operations, except for FSS operations associated with earth stations authorized pursuant to 47 CFR § 25.136 and will comply with any determinations set forth in the *Spectrum Frontiers Proceeding* (GN Docket 14-177).
10. The 29.25-29.5 GHz band is designated for uplinks for FSS systems using geostationary satellites and for feeder uplinks for Mobile Satellite Systems using non-geostationary orbit satellites on a co-primary basis. Communications between U.S.-licensed earth stations and the EchoStar XXIV space station in the 29.3-29.5 GHz band must comply with Section 25.258 of the Commission's rules. 47 CFR § 25.258.
11. In accordance with footnote US211 to 47 CFR § 2.106, Hughes is urged to take all practicable steps to protect radio astronomy observations in the adjacent bands from harmful interference from its operations in the 40.0-42.0 GHz band.
12. Operations of the EchoStar XXIV space station in the 40.0-40.5 GHz frequency band must be successfully coordinated with Federal Space Research Service (SRS) facilities, pursuant to Recommendation ITU-R SA.1396, "Protection Criteria for the Space Research Service in the 37-38 GHz and 40.0-40.5 GHz Bands."
13. Operations in the 47.2-48.2 GHz band must provide interference protection to the fixed and mobile services, except as authorized pursuant to 47 CFR § 25.136.
14. Any future grant of earth station licenses for operations with the EchoStar XXIV space station will be subject to the following condition, unless the condition is satisfied prior to such license grant: in the 48.94-49.04 GHz band, operations must be coordinated with radio astronomy stations operating on a co-primary basis in this band. 47 CFR § 2.106, footnote US342.
15. Any future grant of earth station licenses for operations with the EchoStar XXIV space station will be subject to the following condition: Hughes's earth station emissions into the 50.2-50.4 GHz band must comport with the limits contained in ITU-R Resolution 750 (REV. WRC-15) and/or footnote US156 to Section 2.106 of the Commission's rules, 47 CFR § 2.106, footnote US156, including any future revisions of footnote US156 to Section 2.106. Such revisions may be introduced either because of modifications that may be approved by WRC-19 to Resolution 750, or as a result of a Commission rulemaking

² O3b Limited supports addition of this condition in order to ensure that NGSO systems, such as O3b's system, are protected in the 18.8-19.3 GHz and 28.6-29.1 GHz bands, which are allocated to NGSO systems on a primary basis in the United States. *See generally*, Comments of O3b Limited (filed Apr. 15, 2019). Hughes opposes this condition. *See* Letter from Jennifer A. Manner, Senior Vice President, Regulatory Affairs, Hughes Network Systems, LLC, to Marlene H. Dortch, Secretary, FCC, dated May 3, 2019 (*May 2019 Ex Parte*). First, we will consider Hughes' *May 2019 Ex Parte*, even though it was late-filed pursuant to Section 25.154(c) (responses must be filed within 10 days of the petitions to deny or comments). 47 CFR § 25.154(c). Second, we decline Hughes' request to omit this condition from the EchoStar XXIV grant because this condition helps to ensure that GSO systems, which are secondary in these bands, protect the primary NGSO systems. This condition has also been placed on a prior grant of a GSO satellite seeking authority to operate in the 18.8-19.3 GHz and 28.6-29.1 GHz bands. *See* Intelsat License LLC, IBFS File Nos. SAT-LOA-20170524-00078 & SAT-AMD-20170613-00086 (grant stamp, re-issued June 26, 2018).

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proceeding, independent of any ITU deliberation.

16. Hughes' request for authority to use the 50.4-51.4 GHz band for gateway uplinks is granted, subject to the limitations imposed by Section 25.136 of the Commission's rules, as modified by the *Spectrum Frontiers Fifth Report and Order*.³
17. Hughes' request for waiver of 47 CFR § 25.202(a)(1), concerning the availability of the 50.4-51.4 GHz band for FSS, IS DISMISSED AS MOOT. This band is allocated in the U.S. Table of Frequency Allocations to the FSS, but at the time Hughes filed its application the 50.4-51.4 GHz band was not listed among the available frequencies for FSS in Section 25.202(a)(1) of the rules. The Commission subsequently removed the list of frequencies in Section 25.202(a)(1) as unnecessary, thereby eliminating this barrier against applying for FSS use of the frequencies in the 50.4-51.4 GHz band.
18. Prior to commencing operations with the EchoStar XXIV space station, Hughes must file with the Commission the information required by Section 25.172 of the Commission's rules, 47 CFR § 25.172.
19. Hughes request for a waiver of Section 25.114(c)(4)(vii) of the Commission's rules, 47 CFR § 25.114(c)(4)(vii), IS GRANTED. In response to a request from the Commission for additional information regarding its application, Hughes provided a revised isoline diagram and amended its Schedule S accordingly. We find that this showing, along with the other technical information provided with its application, is sufficient to support a waiver.
20. Hughes request for a waiver of footnote NG165 Section 2.106 of the Commission's Rules IS DISMISSED as MOOT. GSO operations in this band are permitted on a secondary basis. 47 CFR § 2.106.
21. Hughes request for a waiver of Section 25.156(d)(5) of the Commission rules, 47 CFR § 25.156(d)(5), IS DISMISSED as MOOT. Section 25.156(d)(5) stated that in bands where the Commission has not adopted frequency-band specific service rules it will not consider applications for GSO-like operation after it has granted an application for NGSO-like operation in the same band, and vice versa, unless and until the Commission establishes NGSO/GSO sharing criteria for that frequency band. However, the Commission recently eliminated Section 25.156(d)(5) in a rulemaking⁴ and those rules are now in effect making a waiver of the rule unnecessary.
22. Hughes request for a waiver of the NGSO FSS Cut-off deadline for applications in the V-band IS DISMISSED as MOOT. By its own terms the application deadline of which Hughes requested a waiver applied only to NGSO FSS systems.⁵ Consequently the EchoStar XXIV space station, a GSO-like system, was not covered by the filing deadline making a waiver unnecessary.
23. Hughes's request for a waiver of the application processing rules of Sections 25.156(d)(3) and (4) of the Commission's rules, 47 CFR § 25.156(d)(3)-(4), IS DISMISSED as MOOT. Section 25.156(d)(3) requires the Commission to consider applications covering multiple service bands as separate applications for each band. As all the frequency bands requested by Hughes are addressed in this grant, no waiver of Section 25.156(d)(3) is necessary. Section 25.156(d)(4) requires that applications for feeder-link

³ See generally, *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services et. al.*, Fifth Report and Order, FCC 19-30, paras. 8-12 (rel. Apr. 15, 2019).

⁴ *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Report and Order and Further Notice of Proposed Rulemaking, 32 FCC Rcd 7809, 7821-22, para. 39 (2017).

⁵ *Cut-off Established for Additional NGSO-Like Satellite Applications or Petitions for Operations in the 37.5-40.0 GHz, 40.0-42.0 GHz, 47.2-50.2 GHz, and 50.4-51.4 GHz Bands*, Public Notice, 31 FCC Rcd 11957 (IB 2016).

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authority be treated as an application separate from associated service bands. However, as an FSS system EchoStar XXIV by definition does not have feeder links⁶ making waiver of Section 25.156(d)(4) unnecessary.

24. Hughes must post a surety bond in satisfaction of 47 CFR §§ 25.165(a)(2) & (b) no later than April 19, 2018, and thereafter maintain on file a surety bond requiring payment in the event of a default in an amount, at minimum, determined according to the formula set forth in 47 CFR § 25.165(a)(2); and

Hughes must launch the space station, position it in its assigned orbital location, and operate it in accordance with the station authorization no later than March 20, 2023, 47 CFR § 25.164(a).

This authorization will be null and void automatically, without further Commission action if Hughes fails to comply with any of these requirements. Failure to comply with the milestone requirement of 47 CFR § 25.164(a) will also result in forfeiture of Hughes's surety bond. By April 3, 2023, Hughes must either demonstrate compliance with its milestone requirement or notify the Commission in writing that the requirement was not met. 47 CFR § 25.164(f).

25. The license term for the EchoStar XXIV space station is 15 years and will begin on the date that Hughes certifies to the Commission that EchoStar XXIV has been successfully placed into orbit and its operations fully conform to the terms and conditions of this authorization. Hughes is directed to file its certification of commencement of operation with the Commission within five business days of EchoStar XXIV being placed into operation at the 95.2° W.L. orbital location.

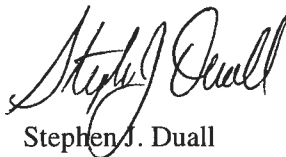
Licensee/grantee is afforded thirty (30) days from the date of release of this action to decline the grant as conditioned. Failure to respond within this period will constitute formal acceptance of the grant as conditioned.

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

Station licenses are subject to the conditions specified in Section 309(h) of the Communications Act of 1934, as amended, 47 U.S.C. § 309(h).

Action Date:	June 13, 2019	
Term Dates	From: see conditions	To: see conditions

Approved:



Stephen J. Duall
Chief, Satellite Policy Branch

⁶ 47 CFR § 25.103.

9-16. Name of Contact Representative

Name:	Hughes Network Systems, LLC	Phone Number:	301-428-5893
Company:		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:	

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
- (N/A) b12. Application for Database Entry
- b13. Amendment to a Pending Database Entry Application
- b14. Modification of Database Entry

<p>17c. Is a fee submitted with this application?</p> <p><input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R.Section 1.1114).</p> <p><input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee</p> <p><input type="radio"/> Other(please explain):</p>	
<p>17d.</p> <p>Fee Classification BFY – Space Station Modification(Geostationary)</p>	
<p>18. If this filing is in reference to an existing station, enter:</p> <p>(a) Call sign of station: S3017</p>	<p>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:</p> <p>(a) Date pending application was filed: (b) File number: SATLOA2017062100092</p>

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: 18300

Frequency Upper: 51400

(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

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?	<input type="radio"/> Yes <input checked="" type="radio"/> No
30. Is the applicant an alien or the representative of an alien?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> 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?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> 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?
If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.

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 explanation of circumstances.

Yes No

Exhibit 2

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.

Exhibit 3

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? United States

43. Description. (Summarize the nature of the application and the services to be provided). (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

Applicant seeks to modify EchoStar XXIV license to - 1) add spectrum at 28.6-29.1 GHz for FSS feeder uplinks; 2) add spectrum at 18.8-19.3 GHz for FSS downlinks to user terminals in the U.S.; and 3) provide an updated description of the orbital debris mitigation plan. See Exhibit 1.

Exhibit 1

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

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.

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
Jennifer A. Manner

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46. Title of Person Signing
Senior Vice President, Regulatory Affairs

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