

Approved by OMB
3060-0678

Date & Time Filed: Jul 10 2019 8:10:12:646PM
File Number: SES-MFS-20190710-00898

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:
MOD to ESAA License Call Sign E080100 to Add SES-14 @ 47.5 W.L.

1-8. Legal Name of Applicant	
Name: Global Eagle Telecom Licensing Subsidiary LLC	Phone Number: 310-740-8600
DBA Name:	Fax Number:
Street: 6080 Center Drive Suite 1200	E-Mail: Julia.Waldron@globaleagle.com
City: Los Angeles	State: CA
Country: USA	Zipcode: 90045 -
Attention: Ms Julia Waldron	

9-16. Name of Contact Representative	
Name: David S. Keir	Phone Number: 202-416-6742
Company: Lerman Senter PLLC	Fax Number: 202-293-7783
Street: 2001 L Street, N.W. Suite 400	E-Mail: dkeir@lermansenter.com
City: Washington	State: DC
Country: USA	Zipcode: 20036-
Attention: David S. Keir	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.	(N/A) b1. Application for License of New Station (N/A) b2. Application for Registration of New Domestic Receive-Only Station <input type="radio"/> b3. Amendment to a Pending Application <input checked="" type="radio"/> b4. Modification of License or Registration b5. Assignment of License or Registration b6. Transfer of Control of License or Registration <input type="radio"/> 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.
<input checked="" type="radio"/> a1. Earth Station <input type="radio"/> a2. Space Station	

17c. Is a fee submitted with this application? <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). <input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee <input type="radio"/> Other(please explain):

17d. Fee Classification CGX - Fixed Satellite Transmit/Receive Earth Station	
18. If this filing is in reference to an existing station, enter: (a) Call sign of station: E080100	19. If this filing is an amendment to a pending application enter both fields, if this filing is a modification please enter only the file number: (a) Date pending application was filed: (b) File number: SESMFS2018051500624

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)

ESAA

21. STATUS: Choose the button next to the applicable status. Choose only one.

- Common Carrier Non-Common Carrier

22. If earth station applicant, check all that apply.

- Using U.S. licensed satellites
 Using Non-U.S. licensed satellites

23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:

- Connected to a Public Switched Network Not connected to a Public Switched Network N/A

24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all applicable frequency band(s).

- a. C-Band (4/6 GHz) b. Ku-Band (12/14 GHz)
 c. Other (Please specify upper and lower frequencies in MHz.)

Frequency Lower: Frequency Upper: (Please specify additional frequencies in an attachment)

TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.

- a. Fixed Earth Station
 b. Temporary-Fixed Earth Station
 c. 12/14 GHz VSAT Network
 d. Mobile Earth Station
 e. Geostationary Space Station
 f. Non-Geostationary Space Station
 g. Other (please specify) ESAA Terminals

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, Yes No
 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.

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 checked="" type="radio"/> Yes <input 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?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> 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.	<input type="radio"/> Yes <input checked="" type="radio"/> 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.	<input type="radio"/> Yes <input checked="" type="radio"/> No
37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explanation of circumstances.	<input type="radio"/> Yes <input checked="" type="radio"/> 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	<input type="radio"/> Yes <input checked="" type="radio"/> 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.	<input type="radio"/> Yes <input checked="" type="radio"/> 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.	
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.	<input checked="" type="radio"/> Yes <input type="radio"/> No
Exhibit A	
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? Brazil	

43. Description. (Summarize the nature of the application and the services to be provided). Application for modification of existing ESAA network license (Call Sign E080100) to add the SES-14 satellite at 47.5 degrees West Longitude as a new point of communication. Explanatory Stmt

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.	<input checked="" type="radio"/> 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.	<input type="radio"/> 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.	<input type="radio"/> C
Exhibit B	

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CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Choose the button next to applicable response.)

- Individual
 Unincorporated Association
 Partnership
 Corporation
 Governmental Entity
 Other (please specify)

45. Name of Person Signing
Simon McLellan

46. Title of Person Signing
Chief Engineer

**WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT
(U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION
(U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).**

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

FOR OFFICIAL USE ONLY

Location of Earth Station Site

E1. Site Identifier:	Remote Terminal 2	E5. Call Sign:	E080100
E2. Contact Name	Simon McLellan	E6. Phone Number:	(946) 363-0732
E3. Street:		E7. City:	
E4. State		E8. County:	
E10. Area of Operation:		E9. Zip Code	
E11. Latitude:	0 ° 0 ' 0.0 " N		
E12. Longitude:	0 ° 0 ' 0.0 " W		
E13. Lat/Lon Coordinates are:	<input type="radio"/> NAD-27	<input checked="" type="radio"/> NAD-83	<input type="radio"/> 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.

Yes No 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?

Yes No N/A

E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.

Yes No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as

Yes No

E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as

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.**

Yes No

POINTS OF COMMUNICATION

Satellite Name:SES-14 (S2974) | SES-14 | 47.5 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	E32. Antenna Size	E41/42. Antenna Gain Transmint and/or Recieve(____dBi at ____GHz)
Remote Terminal 2	B	1000	TECOM	Ku-Stream	0.62	28.8 dBi at 14.25
Remote Terminal 2	B	1000	TECOM	Ku-Stream	0.62	31.6 dBi at 11.95

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)
B	0.0/0.0	0.0	0.0	0.0	31.6	0.0	43.8

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands(MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier(dBW)	E49. Maximum ERIP Density per Carrier(dBW/4kHz)
B	11700 12200	R	Horizontal and Vertical	36M0G7D	0.0	0.0

E50. Modulation and Services QPSK or octal PSK

B	14050 14470	T	Horizontal and Vertical	1M02G7D	43.8	18.7
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E50. Modulation and Services QPSK or octal PSK

B	14050 14470	T	Horizontal and Vertical	2M04G7D	43.8	15.7
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E50. Modulation and Services QPSK or octal PSK

B	14050 14470	T	Horizontal and Vertical	4M09G7D	43.8	13.7
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E50. Modulation and Services QPSK or octal PSK

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/Western Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon(dBW/4kHz)
B	Geostationary	11700 12200	47.5/47.5	0.0	5.0	0.0	5.0	0.0
	Geostationary	14050 14470	47.5/47.5	0.0	5.0	0.0	5.0	-4.1

REMOTE CONTROL POINT LOCATION

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

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

FOR OFFICIAL USE ONLY

Location of Earth Station Site			
E1. Site Identifier:	Remote Terminal 3	E5. Call Sign:	E080100
E2. Contact Name	Simon McLellan	E6. Phone Number:	(946) 363-0732
E3. Street:		E7. City:	
E4. State		E8. County:	
E10. Area of Operation:		E9. Zip Code	Mobile
E11. Latitude:	0 ° 0 ' 0.0 " N		
E12. Longitude:	0 ° 0 ' 0.0 " W		
E13. Lat/Lon Coordinates are:	<input type="radio"/> NAD-27	<input checked="" type="radio"/> NAD-83	<input type="radio"/> N/A
E14. Site Elevation (AMSL):	0.0 meters		

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide as a technical analysis showing compliance with two-degree spacing policy.	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A
E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non-geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	<input checked="" type="radio"/> Yes <input type="radio"/> No
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	<input type="radio"/> Yes <input checked="" type="radio"/> No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	<input type="radio"/> Yes <input checked="" type="radio"/> No
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.	<input type="radio"/> Yes <input checked="" type="radio"/> No

POINTS OF COMMUNICATION

Satellite Name:SES-14 (S2974) SES-14 47.5 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	E32. Antenna Size	E41/42. Antenna Gain Transmint and/or Recieve(____dBi at ____GHz)		
Remote Terminal 3	C	1000	QEST	Q050000	0.63	32.1 dBi at 11.95		
Remote Terminal 3	C	1000	QEST	Q050000	0.63	33.6 dBi at 14.25		

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)
C	0.0/0.0	0.0	0.0	0.0	25.0	0.0	43.8

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands(MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier(dBW)	E49. Maximum ERIP Density per Carrier(dBW/4kHz)
C	11700 12200	R	Horizontal and Vertical	36M0G7D	0.0	0.0

E50. Modulation and Services QPSK or octal PSK						
C	14050 14470	T	Horizontal and Vertical	1M02G7D	41.9	17.8
E50. Modulation and Services QPSK or octal PSK						

C	14050 14470	T	Horizontal and Vertical	2M04G7D	43.8	16.7
E50. Modulation and Services QPSK or octal PSK						
C	14050 14470	T	Horizontal and Vertical	4M09G7D	43.8	13.7
E50. Modulation and Services QPSK or octal PSK						

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/Western Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon(dBW/4kHz)
C	Geostationary	11700 12200	47.5/47.5	0.0	5.0	0.0	5.0	0.0
	Geostationary	14050 14470	47.5/47.5	0.0	5.0	0.0	5.0	-4.1

REMOTE CONTROL POINT LOCATION

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

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to PRA@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember - You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

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.

ATTACHMENT

Description of Application for Modification of License

1.0 OVERVIEW

Global Eagle Telecom Licensing Subsidiary, LLC (“Global Eagle”) seeks modification of its Ku-band Earth Stations Aboard Aircraft (“ESAA”) license (Call Sign E080100) for the purpose of adding an additional satellite point of communication – the SES-14 satellite (“SES-14”) located at 47.5° West Longitude. Global Eagle seeks this modification subject to all terms and conditions set forth in its current license¹ and the operations proposed are otherwise consistent with the technical specifications set forth in its current license. Operations using the additional satellites would use both the TECOM Ku-Stream (SAA/Remote 2) and QEST Q050000 (GSAA/Remote 3) antennas. The Form 312, Schedule B associated with this filing reflects only the addition of the SES-14 satellite and does not recapitulate all technical data contained in its current license.

2.0 ADDITIONAL POINT OF COMMUNICATION REQUESTED

Global Eagle requests the addition of the SES-14 satellite that is authorized under Call Sign S2974 as a Ku-band Permitted List satellite for service to the United States (*see* FCC File No. SAT-PPL-20160918-00093). The specific frequencies to be used on SES-14 satellite are registered with International Telecommunication Union by the administration of Brazil under the network identifier B-SAT-1W-2.

Complete technical information regarding the SES-14 satellite was submitted to the FCC in the proceeding authorizing the satellite’s inclusion on the Ku-band Permitted List, which is cited in the foregoing paragraph. Global Eagle therefore simply requests that its existing ESAA license be updated to reflect use of SES-14 on a primary basis for ESAA operations in the 14-14.5 GHz and 11.7-12.2 GHz bands.

The addition to the Global Eagle license of authority to communicate using SES-14 will provide additional near-term space segment capacity for Global Eagle’s ESAA network, thereby allowing it to provide greater system throughput and coverage for the provision of its in-flight Wi-Fi connectivity services to airline passengers on flights operating in the Eastern United States and between CONUS and Europe and the Caribbean. Global Eagle is concurrently seeking special temporary authority (“STA”) to permit it to operate using these same parameters on an expedited basis to begin service on or about July 17, 2019,

¹ See Row 44 Inc., Call Sign E080100, FCC File No. SES-MFS-20180515-00624 (Sat. Div., granted 7/17/2018).

3.0 COORDINATION CERTIFICATION [47 C.F.R. §§ 25.227(b)(2) & 25.220(d)]

Global Eagle's intended operations are within the scope that SES S.A. has coordinated with the adjacent satellite operators within six degrees adjacent to SES-14 in either direction along the geostationary arc and should not cause harmful interference to any of these satellites operating in accordance with FCC's two-degree spacing policy. Exhibit A attached hereto provides copies of the coordination certification letter dated July 2, 2019 covering Global Eagle's proposed operations using SES-14.

Global Eagle is aware that multiple NGSO FSS systems have been authorized to provide service to the U.S. market using Ku-band spectrum. It is prepared to enter into discussions with these operators as service is launched in the United States to establish operating parameters that permit successful co-frequency sharing. Global Eagle would modify its operations if necessary to implement any coordination agreement reached. Global Eagle acknowledges that the Commission may condition the grant of any modified license issued to it upon a requirement that it ultimately complete such coordination.

4.0 TECHNICAL DATA, LINK BUDGETS AND PREDICTED COVERAGE AREAS [47 C.F.R. § 25.227(b)(4)]

Exhibit B attached hereto includes representative link budgets and a depiction of the geographic coverage contours for operations using SES-14 at 47.5° W.L.

5.0 REVISED SPACECRAFT, FREQUENCY & BEAM COVERAGE

[See Next Page]

Table 1: Spacecraft, Frequency & Beam Coverage Table
(All Provide Some Coverage to U.S. Locations; * =Non-U.S., Permitted List Satellite)

Satellite	Location	Beam Coverage Area	Tx (GHz)	Rx (GHz)	Satellite Operator	
AMC-1	130.9 W	North America, Central America and Pacific	14.05-14.47	11.7-12.2	SES	
AMC-2	84.85 W	North America, Caribbean and North Atlantic	14.05-14.47	11.7-12.2		
AMC-3	72.0 W	North America, Central America, Atlantic and Caribbean	14.05-14.47	11.7-12.2		
AMC-9	83.0 W	North America, Caribbean, Central America and North Atlantic	14.05-14.47	11.7-12.2		
SES-1	101.0 W	North America, Central America, Pacific and Caribbean	14.05-14.47	11.7-12.2		
SES-10	67.0W	North America, Central America, South Atlantic and Caribbean	14.05-14.47	11.7-12.2		
SES-14	47.5 W	North America, North Atlantic and Caribbean	14.05-14.47	11.7-12.2		
SES-15	129.0 W	North America, Central America, Caribbean and Pacific	14.05-14.47	10.7-10.95, 10.95-11.2, 11.2-11.45, 11.45-11.7, 11.7-12.2		
IS-29E	50.0 W	North America, Central America, South America, North Atlantic and Caribbean	14.05-14.47	10.95-11.2, 11.2-11.45, 11.45-11.7, 11.7-12.2, 12.2-12.5		Intelsat
Eutelsat 115 WB*	114.9 W	North America, North Atlantic and Pacific Ocean	14.05-14.47	11.7-12.2		Eutelsat
Eutelsat 133 WA*	132.85 W	North America and Pacific	14.05-14.47	11.2-11.45, 11.45-11.7, 12.5-12.75		
Telstar 12	109.2 W	North America, Gulf of Mexico and Caribbean	14.05-14.47	11.7-12.2	Telesat (Skynet)	

6.0 TELEPORT UPLINK LOCATIONS

Table 2
Teleport Locations for Provision of Service within the United States

Satellite	Orbital Location	Teleport Location(s)	Site Operator	Call Sign(s)
AMC-1	130.9 W	Holmdel, NJ	GEE/MTN	E160163
AMC-2	80.85 W	N. Las Vegas, NV	Hughes	E940460
AMC-3	72.0 W	Holmdel, NJ	GEE/MTN	E160163
AMC-9	83.0 W	North Las Vegas, NV	Hughes	E940460
SES-1	101.0 W	North Las Vegas, NV	Hughes	E940460
SES-10	67.0 W	Steele Valley, CA	Level 3/ Vyvx	E950202
SES-14*	47.5 W	Holmdel, NJ	GEE/MTN	E160163
SES-15	129.0 W	South Mountain, CA	SES	E170139
IS-29E	50.0 W	Holmdel, NJ	GEE/MTN	E160163
Eutelsat 115 WB*	114.9W	Southfield (Detroit), MI	Hughes	E990170
Eutelsat 133 WA*	132.85 W	Kapolei, HI	Hawaii Pacific Teleport	E010236
Telstar 12	109.2W	South Jordan, UT	LBiSat LLC	E030342

* = Non-U.S.-licensed satellite included on Ku-band Permitted List

7.0 LICENSEE CERTIFICATION

I, Simon McLellan, Chief Engineer of Global Eagle Entertainment, Inc. (“Global Eagle”), hereby certify that Global Eagle:

- (1) will continue to comply with the requirements of paragraphs (a)(6), (a)(9), (a)(10), and (a)(11) of Section 25.227 of the Commission’s Rules and the conditions of its existing license; and
- (2) has confirmed, as shown by the SES coordination letter submitted with this application, that the ESAA operations proposed herein are within coordinated parameters for adjacent satellites up to 6 degrees away on the geostationary arc.

Simon McLellan

Simon McLellan
Chief Engineer
Global Eagle Entertainment, Inc.

July 10, 2019

Frederic Portier
Senior Manager, Spectrum Management & Development, Americas

Federal Communications Commission
International Bureau
445 12th Street, S.W.
Washington, D.C. 20554

2 July 2019

Subject: Engineering Certification of SES Americom, Inc. for the SES-14 Satellite

To whom it may concern,

This letter confirms that SES is aware that Global Eagle Entertainment Inc. ("GEE"), licensed by the Federal Communications Commission ("FCC") as Global Eagle Telecom Licensing Subsidiary LLC, is planning to file an application seeking a modification to its blanket authorization (the "Modification Application") to operate technically identical Ku-band Earth Stations Aboard Aircraft ("ESAA") pursuant to ITU RR 5.504A and Section 25.227 of the Commission's rules (Call Sign E080100). The Modification Application will seek authority for GEE's ESAA terminals to communicate with the SES-14 satellite at 47.5° W.L., under the current ESAA rules, including Section 25.227.

Based upon the representations made to SES by GEE concerning how it will operate on SES-14 according to its letter dated July 1, 2019:

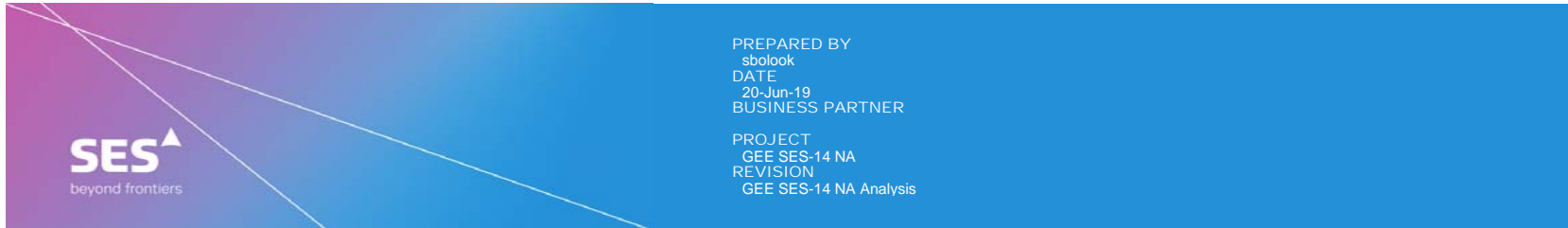
- SES certifies that it has completed coordination as required under the FCC's rules and that the power density levels specified by GEE are consistent with any existing coordination agreements to which SES is a party with adjacent satellite operators within +/- 6 degrees of orbital separation from SES-14.
- If the FCC authorizes the operations proposed by GEE, SES will include the power density levels specified by GEE in all future satellite network coordination with other operators of satellites adjacent to SES-14.

Yours Sincerely,



Frederic Portier

SES LINK BUDGET ANALYSIS



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Satellite	SES-14
Orbital location	°E -47.50

Transponder information	
Transponder ID	NAV-D21/NAH-D21 (Multi-Carrier) FCA37
Center frequency and polarisation (U/D)	MHz 14295 VLP / 11995 HLP
Bandwidth	MHz 72.00
Transponder Dlk Saturation EIRP Towards Beam-Peak	dBW 54.24
Transponder Beam-Peak G/T	dB/K 8.01
Beam-Peak SFD	dBW/m ² -92.17
Operational mode	Multiple Carrier, [IBO: -4.5 dB OBO: -3.5 dB]
Inclined (Yes,No)	No

AGGREGATE RESOURCE REQUIREMENTS	
Capacity Balanced / BW / PWR Limited	
Number of carriers in transponder	3
Required bandwidth	MHz 70.3
Allocated bandwidth	MHz 59.32
PEB of carriers	MHz 70.29

ANALYSIS HIGHLIGHTS ACROSS ALL SITES IN ANALYSIS:

Link margin review [over sites]	
Site with highest clear sky link margin	Ku_Tecom_KuStream1000 >Holmdel Teleport Woodbine K-13 SES-14 Ku-Band TT&C/GW : 1.8 dB
Site with lowest clear sky link margin	Holmdel Teleport Woodbine K-13 SES-14 Ku-Band TT&C/GW>Ku_Tecom_KuStream1000 : 0.2 dB
Link availability review [over sites]	
Site with highest link availability	Holmdel Teleport Woodbine K-13 SES-14 Ku-Band TT&C/GW>Ku_Tecom_KuStream1000 : 99.6226 %
Site with lowest link availability	Ku_Tecom_KuStream1000 >Holmdel Teleport Woodbine K-13 SES-14 Ku-Band TT&C/GW : 99.0000 %

Calculation type	Uncorrelated rain events	Uncorrelated rain events	Uncorrelated rain events
Carrier Name	GEE D21 RTN 512kbps C)	GEE D21 RTN 1024kb C	GEE D21 FWD 54MHz CXR v6
Carrier PEB	MHz 0.09	0.19	70.00
Carrier Predicted Total C/(N+I)	dB 1.05	4.06	6.50
Link total Eb/No	dB 7.07	7.07	4.31
Required Eb/No (including implementation and additional margin)	dB 5.30	5.30	4.16
Link closes? [3 out of 3]	Yes	Yes	Yes
Link margin in clear sky (For ACM carriers, residual margin in CS)	dB 1.77	1.77	0.15
Target Link Availability	% yr 99.000	99.000	99.000
Achieved Link Availability	% yr 99.000	99.000	99.623
Availability Requirement Satisfied? [3 out of 3]	Yes	Yes	Yes
Balanced/Power/Bandwidth limited	BW Lim	BW Lim	PWR Lim
Summary of carrier emission levels in dBW/Hz			
Carrier power density at transmit antenna flange	dBW/Hz -53.28	-50.23	-66.07
Carrier Uplink EIRP density	dBW/Hz -24.99	-21.95	-8.86
Carrier power flux spectral density	dBW/m ² /Hz -187.98	-184.94	-173.32
Carrier Downlink EIRP density at beam peak	dBW/Hz -41.17	-38.13	-25.91

EARTH STATIONS			
Tx earth station ID	Ku_Tecom_KuStream1000	Ku_Tecom_KuStream10	Holmdel Teleport Woodbine K-13 SES-14 Ku-Band TT&C/GW
Latitude	°N 38.84	38.84	40.39

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SES LINK BUDGET ANALYSIS

Longitude	°E	-76.22	-76.22	285.83
Antenna diameter	m	0.38	0.38	6.10
Skew angle at transmit location	deg.	30.65	30.65	27.65
Effective (Reflected) Elevation	deg.	36.24	36.24	36.03
Uplink aspect correction	dB	0.73	0.73	1.71
Receive earth station ID		Holmdel Teleport Woodbine	Holmdel Teleport Wood	Ku_Tecom_KuStream1000
Latitude	°N	40.39	40.39	38.84
Longitude	°E	285.83	285.83	-76.22
Antenna diameter	m	6.10	6.10	0.38
Skew angle at receive location	deg.	27.65	27.65	30.65
Effective (Reflected) Elevation	deg.	36.03	36.03	36.24
Effective G/T at the carrier frequency (Clear-Sky)	dB/K	34.29	34.29	12.06
Downlink aspect correction	dB	1.29	1.29	1.01
CARRIER INFORMATION				
Carrier uplink centre frequency	MHz	14295.00	14295.00	14295.00
Carrier downlink centre frequency	MHz	11995.00	11995.00	11995.00
Number of carriers		1.00	1.00	1.00
Modulation setting name (clear sky)		OQPSK_1/2_TURBO_1.3	OQPSK_1/2_TURBO_1	QPSK 5/6_S2(OFF)N_1.20
Information rate (clear sky)	Mbps	0.51	1.02	74.46
Symbol rate	Mspss	0.51	1.02	45.00
Aggregate code rate (clear sky)		0.50	0.50	0.83
Noise Bandwidth	MHz	2.05	2.05	45.00
Spreading Factor		4.00	2.00	1.00
Allocated bandwidth	MHz	2.66	2.66	54.00
Power Equivalent Bandwidth	MHz	0.09	0.19	70.00
ACM analysis (constant SR)				
Spectral efficiency in clear sky	b/sym	1.00	1.00	1.65
Clear sky throughput	Mbps	0.51	1.02	74.46
Clear sky achievable modulation setting		OQPSK_1/2_TURBO_1.3	OQPSK_1/2_TURBO_1	QPSK 5/6_S2(OFF)N_1.20
Under fade: Spectral efficiency at required availability	b/sym	1.00	1.00	0.99
Under fade: Throughput when meeting the required availability	Mbps	0.51	1.02	44.50
Under fade : Mod Cod meeting the required availability		OQPSK_1/2_TURBO_1.3	OQPSK_1/2_TURBO_1	QPSK 1/2_S2(OFF)N_1.20
LINK BUDGET				
Uplink Calculations				
Carrier Input Backoff in clear sky	dB	-33.30	-30.26	-4.62
C/N _{UP,Thermal} : Uplink Thermal Noise ratio (clear sky)	dB	3.47	6.51	18.72
C/I _{UP, NO ASI} : Uplink Thermal Noise and interference ratio prior to ASI (clear sky)	dB	3.46	6.49	18.41
C/(N+I)_{UP} Uplink Thermal Noise and interference ratio (clear sky)	dB	2.16	5.19	17.19
Total propagation loss considering uplink rain fade	dB	1.92	1.92	4.50
Resulting uplink path availability	% yr	99.0166	99.0166	99.8924
Downlink Calculations				
Carrier Downlink EIRP towards Receive E/S	dBW	20.66	23.70	49.61
Carrier Downlink EIRP at beam peak	dBW	21.94	24.98	50.62
Carrier Output Backoff (clear sky)	dB	-32.30	-29.26	-3.62
C/I _{DN, NO ASI} : Downlink Thermal Noise and interference ratio prior to ASI (clear sky)	dB	7.90	10.82	7.76
C/N _{DN,Thermal} : Downlink Thermal Noise ratio (clear sky)	dB	14.67	17.71	7.98
C/(N+I)_{DN} Downlink Thermal Noise and interference ratio (clear sky)	dB	7.51	10.44	6.88
Total propagation loss considering downlink rain fade	dB	7.01	7.03	2.24
Resulting downlink path availability	% yr	99.98	99.98	99.73
NOISE CONTRIBUTION ANALYSIS				
Limiting factor		Uplink Thermal Noise	Uplink Thermal Noise	Downlink Thermal Noise
E/S HPA Intermodulation	dB	33.00	33.00	33.00
Uplink Thermal Noise	dB	3.47	6.51	18.72
Uplink Co-channel Interference	dB	33.00	33.00	33.00
Uplink Adjacent Satellite Interference	dB	8.04	11.08	23.29
Transponder Intermodulation	dB	9.08	12.12	24.34
Adjacent Channel Interference	dB	27.00	27.00	27.00
Downlink Thermal Noise	dB	14.67	17.71	7.98
Downlink Co-channel Interference	dB	26.00	26.00	26.00
Downlink Adjacent Satellite Interference	dB	18.16	21.20	14.26
Thermal noise delta (Up - Dn)	dB	11.20	11.20	10.74
Upper bound to C/(N+I)	dB	3.15	6.19	7.63

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SES LINK BUDGET ANALYSIS

Total C/(N+I) clear sky	dB	1.05	4.06	6.50
Total Eb/No	dB	7.07	7.07	4.31
Total C/(N+I), excluding ASI, clear sky	dB	2.12	5.12	7.40
Link margin in clear sky (For ACM carriers, residual margin in CS)	dB	1.77	1.77	0.15

POWER DENSITY REVIEW				
Carrier power density at antenna flange (clear sky)	dBW/Hz	-53.28	-50.23	-66.07
Uplink EIRP density	dBW/Hz	-24.99	-21.95	-8.86
Skew angle at transmit location	deg.	30.65	30.65	27.65
Uplink off-axis EIRP density at 2 deg.	dBW/Hz	-36.78	-33.74	-44.60
Downlink EIRP density at beam peak	dBW/Hz	-41.17	-38.13	-25.91

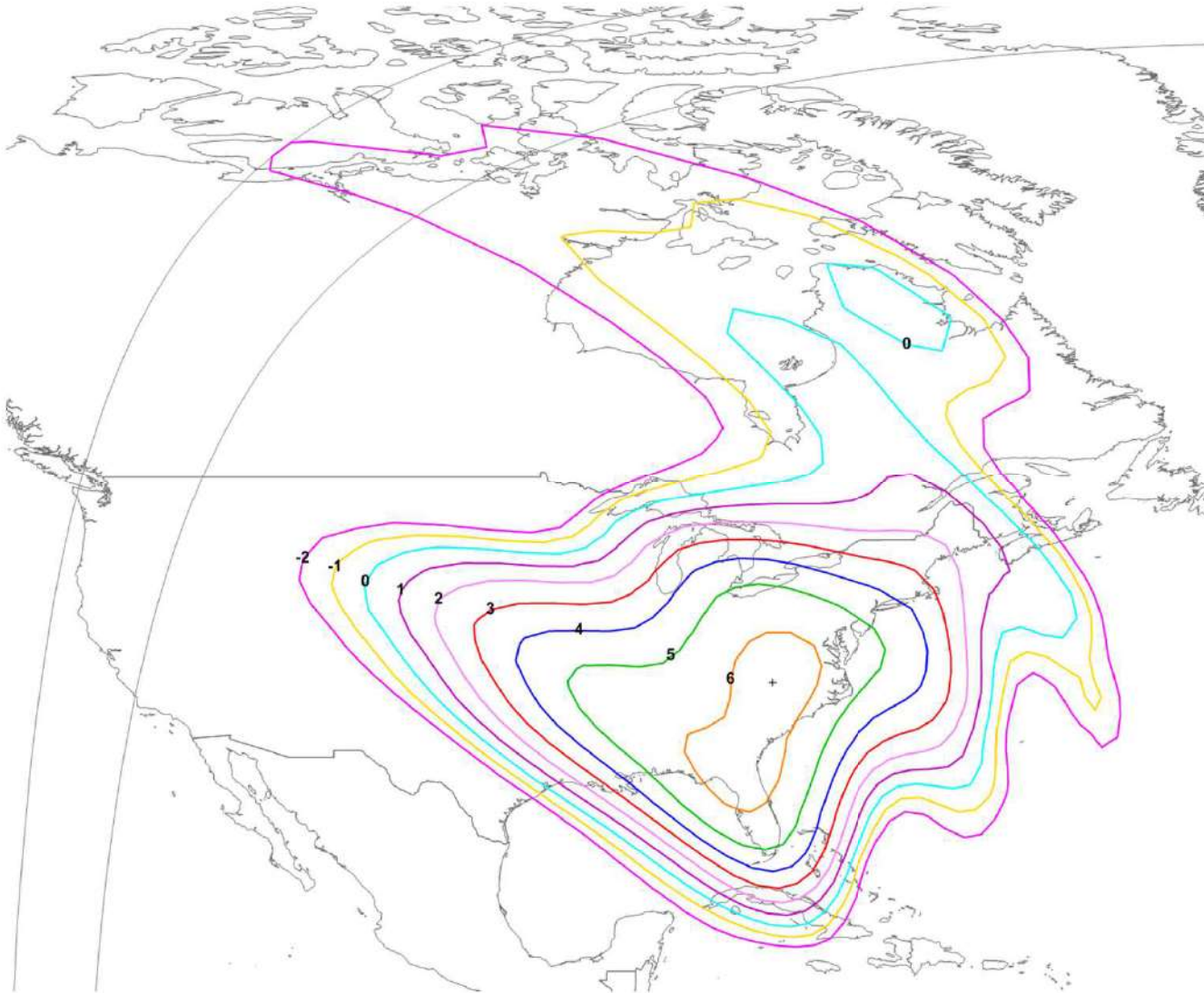
HPA Sizing				
Total number of carriers through HPA		1.00	1.00	1.00
Total EIRP required from E/S	dBW	38.01	41.05	67.67
UPC Range	dB	0.00	0.00	0.00
HPA type/mode		SSPA Multi Carrier	SSPA Multi Carrier	Not Defined Multi Carrier
Required backoff	dB	-1.00	-1.00	-4.00
Required HPA capability	W	12.13	24.43	31.34
Recommended HPA size	W	16.00	25.00	35.00

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Satellite Coverage Beams

Ku-band

Ku-band: USA, East coast (NA) G/T



Contours Shown

G/T [dB/K]	Min. SFD [dBW/m ²]	Max. SFD [dBW/m ²]
6.4	Beam peak	
6	-102	-77
5	-101	-76
4	-100	-75
3	-99	-74
2	-98	-73
1	-97	-72
0	-96	-71
-1	-95	-70

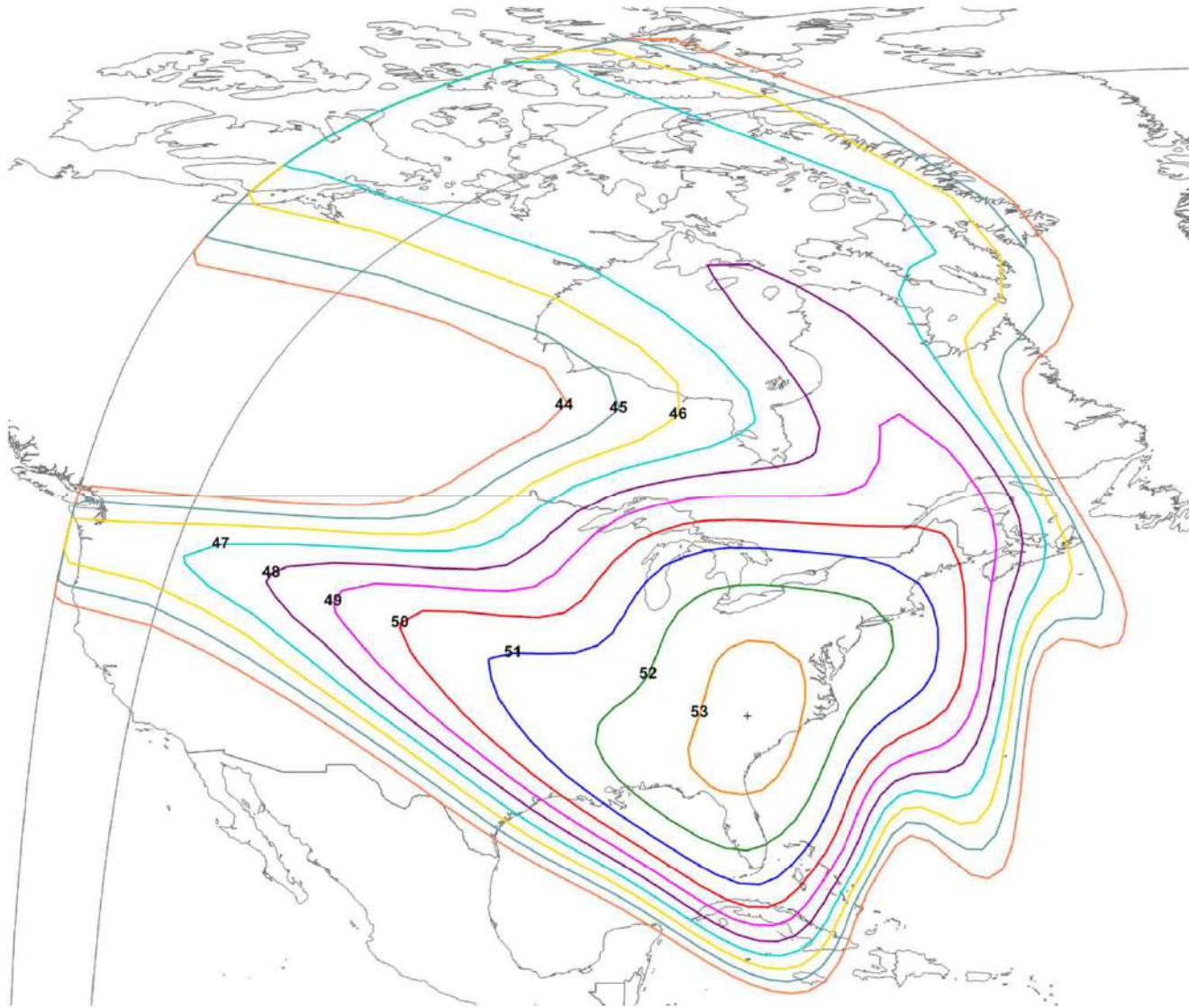
Notes

The adjacent plot shows the predicted performance of a satellite transponder. The coverage is preliminary and performance changes should be expected..

The value in bold represents the nominal edge of coverage. For operation beyond this contour, co-channel interference levels should be assessed on a case by case basis.

Elevation Angles are shown at 0 and 5 degrees.

Ku-band: USA, East coast (NA) EIRP



Contours Shown

EIRP [dBW]

53.4 Beam peak

- 52
- 51
- 50
- 49
- 48
- 47
- 46
- 45
- 44

Notes.

The adjacent plot shows the predicted performance of a satellite transponder. The coverage is preliminary and performance changes should be expected.

The value in bold represents the nominal edge of coverage. For operation beyond this contour, co-channel interference levels should be assessed on a case by case basis.

Elevation Angles are shown at 0 and 5 degrees.

FCC IBFS - Electronic Filing

Submission_id :IB2019002647
Successfully filed on :Jul 10 2019 8:10:12:646PM

The current authorization of Call Sign E080100 expires on Aug 5 2024 1:10:00:000PM. The filing of a modification application does not automatically extend the expiration date of an authorization. In addition, grant of a modification will not extend the expiration date unless that is the modification sought. In general, an application for renewal of the authorization must be filed separately in order to extend the expiration date.

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