July 11, 2019

By Electronic Filing

Jose P. Albuquerque
Chief, Satellite Division, International Bureau
Federal Communications Commission
445 12th St., SW
Washington, D.C. 20554

Re: HNS Licensee Sub, LLC
IBFS File Nos. SES-AMD-20190221-00282 through SES-AMD-20190221-00285, SES-AMD-20190221-00288; SES-AMD-20190221-00293 through SES-AMD-20190221-00299; SES-AMD-20190221-00302 through SES-AMD-20190221-00305; SES-AMD-20190221-00307 through SES-AMD-20190221-00310
Call Signs: E170151 through E170170

Dear Mr. Albuquerque:

HNS License Sub, LLC ("HNS") submits this supplemental letter to clarify that prior coordination notification letters were sent to existing and proposed terrestrial 28 GHz licensees without any stated assumption regarding secondary earth station operations. Accordingly, the attached Comsearch coordination reports have been revised to delete reference to any assumption of secondary operations.

Further, as requested by Commission staff, Comsearch sent the following additional notice to existing and proposed terrestrial 28 GHz licensees: "Pursuant to Section 101.103(d)(2)(ix) of the Commission's Rules, you are being notified that the associated applications for the coordination reports referenced above and previously forwarded in December 2018 are being amended to clarify that, in the frequency band 27.5-28.35 GHz, the applicant is seeking an authorization pursuant to Section 25.136(a)(4) of the Commission's Rules. No response is required."

Please contact the undersigned with any further questions.

Sincerely,

/s/ Kimberly M. Baum
Kimberly M. Baum
Vice President, Regulatory Affairs

Attachments
cc: Karl Kensinger
Kerry Murray
Stephen Duall
Kathyrn Medley
Paul Blais

Ka-Band Earth Station – Billings, MT

Frequency Coordination Report

28 GHz

Prepared on Behalf of
HUGHES NETWORK
SYSTEMS LIMITED

January 9, 2019

COMSEARCH®
A CommScope Company

Table of Contents

1. Summary of Results

On behalf of HUGHES NETWORK SYSTEMS LIMITED, Comsearch performed a coordination notice under Section 25.136(a)(4) of the FCC's rules for all existing and proposed terrestrial licenses within the coordination contours of their proposed Ka-Band earth station in Billings, MT, which will transmit at 28 GHz[1]. Prior-notification letters were sent to the licensees and a copy of the notification data is provided in section four of this report. The earth station coordination was finalized on January 4, 2019.

No objections were received from any of the incumbent 28 GHz licensees.

2. 28 GHz Common Carrier and LTTS Coordination

In accordance with FCC Rules and Regulations, the Ka-Band earth station in Billings, MT was prior-coordinated by Comsearch. A notification letter and datasheets for this earth station were sent to the following 28 GHz common carrier fixed microwave licensees. These licensees are authorized to operate temporary fixed operations from 27.5 – 29.5 GHz on a nationwide basis or local basis.

Licensee	Authorized Geographic Area
Frontier Southwest Incorporated	Nationwide

A notification letter and datasheets for the Ka-Band earth station in Billings, MT were also sent to the following 28 GHz local television transmission licensee. This licensee is authorized to operate temporary fixed operations from 27.5 – 29.5 GHz on a nationwide basis.

Licensee	Authorized Geographic Area
Information Super Station, LLC	Continental US

No objections were received from the common carrier or local television transmission service incumbents.

[1] The proposed earth station will operate in the 27.5 – 28.6 GHz portion of the Ka-Band.

3. 28 GHz UMFUS Coordination

A Notification letter was sent to the following 28 GHz UMFUS licensees. The proposed earth station will operate on frequencies that overlap Channel L1 & L2 of the UMFUS service. The total frequency allocation for Channels L1 & L2 of the UMFUS spectrum appears below.

Channel: **L1** 27.500 - 27.925 GHz
L2 27.925 - 28.350 GHz

Licensee	Channel	Market	Market Name
No Licensees Identified	-	-	-

There were no UMFUS incumbents identified in the Billings, MT area.

4. Earth Station Coordination Data

This section presents the data pertinent to the proposed Ka-Band earth station in Billings, MT. This data was circulated to all incumbent licensees in the shared 28 GHz frequency ranges.

Administrative Information	
Call Sign	E170158
Licensee Code	HUNESY
Licensee Name	HUGHES NETWORK SYSTEMS LIMITED

Site Information	BILLINGS, MT
Latitude (NAD 83)	45° 46' 7.3" N
Longitude (NAD 83)	108° 32' 29.0" W
Climate Zone	A
Rain Zone	5
Ground Elevation (AMSL)	962.06 m / 3156.4 ft

Link Information	
Satellite Type	Geostationary
Mode	TO - Transmit-Only
Modulation	Digital
Satellite Arc	95.2° W to 95.2° West Longitude
Azimuth Range	161.7° to 161.7°
Corresponding Elevation Angles	35.7° / 35.7°
Antenna Centerline (AGL)	5.49 m / 18.0 ft

Antenna Information		Transmit
Manufacturer		SED
Model		10.0M
Gain / Diameter		67.1 dBi / 10.0 m
3-dB / 15-dB Beamwidth		0.08° / 0.16°
Max Available RF Power	(dBW/4 kHz)	-35.0
	(dBW/MHz)	-11.0
Maximum EIRP	(dBW/4 kHz)	32.1
	(dBW/MHz)	56.1
Interference Objectives:	Long Term	-151.0 dBW/4 kHz 20%
	Short Term	-128.0 dBW/4 kHz 0.0025%

Frequency Information	Transmit 28.0 GHz
Emission / Frequency Range (MHz)	450MG7W - 470MG7W / 27500.0 - 28600.0
Max Great Circle Coordination Distance	100.0 km / 62.1 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi

Coordination Values	BILLINGS, MT
Licensee Name	HUGHES NETWORK SYSTEMS LIMITED
Latitude (NAD 83)	45° 46' 7.3" N
Longitude (NAD 83)	108° 32' 29.0" W
Ground Elevation (AMSL)	962.06 m / 3156.4 ft
Antenna Centerline (AGL)	5.49 m / 18.0 ft
Antenna Mode	Transmit 28.0 GHz
Interference Objectives: Long Term	-151.0 dBW/4 kHz 20%
Short Term	-128.0 dBW/4 kHz 0.0025%
Max Available RF Power	-35.0 (dBW/4 kHz)

		Transmit 28.0 GHz		
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)
0	1.90	142.09	-10.00	100.00
5	1.83	139.70	-10.00	100.00
10	1.73	136.91	-10.00	100.00
15	1.62	133.81	-10.00	100.00
20	1.56	130.50	-10.00	100.00
25	1.47	126.99	-10.00	100.00
30	1.42	123.34	-10.00	100.00
35	1.33	119.55	-10.00	100.00
40	1.15	115.64	-10.00	100.00
45	0.93	111.65	-10.00	100.00
50	0.91	107.67	-10.00	100.00
55	0.00	103.49	-10.00	100.00
60	0.00	99.47	-10.00	100.00
65	0.00	95.43	-10.00	100.00
70	0.48	91.38	-10.00	100.00
75	0.72	87.29	-10.00	100.00
80	1.32	83.15	-10.00	100.00
85	1.43	79.03	-10.00	100.00
90	1.24	74.99	-10.00	100.00
95	1.34	70.93	-10.00	100.00
100	1.32	66.96	-10.00	100.00
105	0.95	63.17	-10.00	100.00
110	0.56	59.54	-10.00	100.00
115	0.66	55.83	-10.00	100.00
120	0.70	52.28	-10.00	100.00
125	0.90	48.81	-10.00	100.00
130	0.81	45.73	-9.50	100.00
135	1.13	42.62	-8.74	100.00
140	1.17	40.04	-8.06	100.00
145	1.69	37.43	-7.33	100.00
150	1.42	35.98	-6.90	100.00
155	1.28	34.97	-6.59	100.00
160	0.84	34.88	-6.57	100.00
165	0.78	35.05	-6.62	100.00
170	0.88	35.66	-6.81	100.00
175	0.90	36.95	-7.19	100.00
180	0.88	38.79	-7.72	100.00
185	0.88	41.06	-8.34	100.00

Coordination Values	BILLINGS, MT
Licensee Name	HUGHES NETWORK SYSTEMS LIMITED
Latitude (NAD 83)	45° 46' 7.3" N
Longitude (NAD 83)	108° 32' 29.0" W
Ground Elevation (AMSL)	962.06 m / 3156.4 ft
Antenna Centerline (AGL)	5.49 m / 18.0 ft
Antenna Mode	Transmit 28.0 GHz
Interference Objectives: Long Term	-151.0 dBW/4 kHz 20%
Short Term	-128.0 dBW/4 kHz 0.0025%
Max Available RF Power	-35.0 (dBW/4 kHz)

			Transmit 28.0 GHz	
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.97	43.64	-9.00	100.00
195	0.76	46.75	-9.74	100.00
200	0.50	50.11	-10.00	100.00
205	0.62	53.45	-10.00	100.00
210	0.00	57.30	-10.00	100.00
215	0.00	60.97	-10.00	100.00
220	0.00	64.74	-10.00	100.00
225	0.00	68.60	-10.00	100.00
230	0.00	72.53	-10.00	100.00
235	0.00	76.51	-10.00	100.00
240	0.00	80.53	-10.00	100.00
245	0.26	84.55	-10.00	100.00
250	0.30	88.62	-10.00	100.00
255	0.32	92.70	-10.00	100.00
260	0.36	96.77	-10.00	100.00
265	0.39	100.83	-10.00	100.00
270	0.44	104.87	-10.00	100.00
275	0.44	108.85	-10.00	100.00
280	0.46	112.79	-10.00	100.00
285	0.48	116.66	-10.00	100.00
290	0.52	120.45	-10.00	100.00
295	0.53	124.11	-10.00	100.00
300	1.30	128.04	-10.00	100.00
305	1.52	131.57	-10.00	100.00
310	1.64	134.83	-10.00	100.00
315	1.67	137.78	-10.00	100.00
320	1.72	140.41	-10.00	100.00
325	1.90	142.76	-10.00	100.00
330	1.89	144.46	-10.00	100.00
335	1.83	145.56	-10.00	100.00
340	1.93	146.21	-10.00	100.00
345	1.98	146.15	-10.00	100.00
350	1.96	145.38	-10.00	100.00
355	1.95	144.02	-10.00	100.00

5. Contact Information

For questions or information regarding the 28 GHz Frequency Coordination Report, please contact:

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