



**UNITED STATES OF AMERICA  
FEDERAL COMMUNICATIONS COMMISSION**

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**RADIO STATION AUTHORIZATION**

Name: Harris CapRock Communications, Inc.

Call Sign: E060157

Authorization Type: Modification of License

File Number: SES-MFS-20161006-00829

Non Common Carrier

Grant date: 04/18/2017

Expiration Date: 08/14/2021



Nature of Service: Other

Class of Station: Other

**A) Site Location(s)**

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)	ESV	4400 S. Sam Houston Pkwy. E. Houston, TX 77048			0	NA
		Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.				
2)	INTELLIAN V60	0.6M. (500 UNITS)  GM AO PO CARRIBBEAN SEA US WATERWAYS,				83
		Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.				
3)	INTELLIAN V80	0.83M. (500 UNITS)  GM AO PO CARRIBBEAN SEA US WATERWAYS,				83
		Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.				
4)	ORBIT 7103	1.2M (250 UNITS) LA				83
		Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.				
5)	Oceans	4400 S. Sam Houston Pkwy Houston, USA, TX 77048				83
		Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.				



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**A) Site Location(s)**

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
6)	SEATEL 75CM (USAT30)	0.75CM (500 UNITS) OCEANS,				NA
Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.						
7)	ST5000-2.4	4400 S. SAM HOUSTON CENTER US AND INTERNATIONAL WATERWAYS HOUSTON, TX 77046				NA
Licensee certifies antenna(s) do not comply with Section 25.209. Please refer to Section E for special conditions placed upon antennas at this site.						

*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 August 14, 2006 (3 AM Eastern Standard Time) and ending August 14, 2021 (3 AM Eastern Standard Time) . The required date of completion of construction and commencement of operation is April 18, 2018 (3 AM Eastern Standard Time) . Grantee must file with the Commission a certification upon completion of construction and commencement of operation.*

**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)	14000.0000-14500.0000	H,V	100KG7D	Tx	37.00	23.02	ESV4003		Digital
2)	14000.0000-14500.0000	H,V	150KG7D	Tx	38.80	23.06	ESV4003		Digital
3)	14000.0000-14500.0000	H,V	200KG7D	Tx	40.00	23.01	ESV4003		Digital
4)	14000.0000-14500.0000	H,V	300KG7D	Tx	41.80	23.05	ESV4003		Digital
5)	14000.0000-14500.0000	H,V	50K0G7D	Tx	34.00	23.03	ESV4003		Digital
6)	14000.0000-14500.0000	H,V	780KG7D	Tx	46.00	23.10	ESV4003		Digital
7)	12500.0000-12750.0000	H,V	1M76G7W	Rx			ESV4003		Digital



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#	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
8)	12500.0000-12750.0000	H,V	2M41G7W	Rx			ESV4003		Digital
9)	12500.0000-12750.0000	H,V	3M52G7W	Rx			ESV4003		Digital
10)	12500.0000-12750.0000	H,V	5M77G7W	Rx			ESV4003		Digital
11)	11700.0000-12200.0000	H,V	1M92G7D	Rx			ESV4003		Digital
12)	11700.0000-12200.0000	H,V	390KG7D	Rx			ESV4003		Digital
13)	11700.0000-12200.0000	H,V	3M85G7D	Rx			ESV4003		Digital
14)	11700.0000-12200.0000	H,V	5M76G7D	Rx			ESV4003		Digital
15)	11700.0000-12200.0000	H,V	7M68G7D	Rx			ESV4003		Digital
16)	11700.0000-12200.0000	H,V	8M67G7D	Rx			ESV4003		Digital
17)	11450.0000-11700.0000	H,V	1M76G7W	Rx			ESV4003		Digital
18)	11450.0000-11700.0000	H,V	2M41G7W	Rx			ESV4003		Digital
19)	11450.0000-11700.0000	H,V	3M52G7W	Rx			ESV4003		Digital
20)	11450.0000-11700.0000	H,V	5M77G7W	Rx			ESV4003		Digital
21)	10950.0000-11200.0000	H,V	1M76G7W	Rx			ESV4003		Digital
22)	10950.0000-11200.0000	H,V	2M41G7W	Rx			ESV4003		Digital
23)	10950.0000-11200.0000	H,V	3M52G7W	Rx			ESV4003		Digital
24)	10950.0000-11200.0000	H,V	5M77G7W	Rx			ESV4003		Digital
25)	14000.0000-14500.0000	H,V	150KG7D	Tx	38.80	23.06	ESV4006		Digital
26)	14000.0000-14500.0000	H,V	200KG7D	Tx	40.00	23.01	ESV4006		Digital
27)	14000.0000-14500.0000	H,V	300KG7D	Tx	41.80	23.05	ESV4006		Digital
28)	14000.0000-14500.0000	H,V	390KG7D	Tx	43.00	23.11	ESV4006		Digital
29)	14000.0000-14500.0000	H,V	50K0G7D	Tx	34.00	23.03	ESV4006		Digital
30)	14000.0000-14500.0000	H,V	780KG7D	Tx	46.00	23.10	ESV4006		Digital
31)	12500.0000-12750.0000	H,V	1M76G7W	Rx			ESV4006		Digital



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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
32)	12500.0000-12750.0000	H,V	2M41G7W	Rx			ESV4006		Digital
33)	12500.0000-12750.0000	H,V	3M52G7W	Rx			ESV4006		Digital
34)	12500.0000-12750.0000	H,V	5M77G7W	Rx			ESV4006		Digital
35)	11700.0000-12200.0000	H,V	100KG7D	Rx			ESV4006		Digital
36)	11700.0000-12200.0000	H,V	1M92G7D	Rx			ESV4006		Digital
37)	11700.0000-12200.0000	H,V	3M85G7D	Rx			ESV4006		Digital
38)	11700.0000-12200.0000	H,V	5M76G7D	Rx			ESV4006		Digital
39)	11700.0000-12200.0000	H,V	7M68G7D	Rx			ESV4006		Digital
40)	11700.0000-12200.0000	H,V	8M67G7D	Rx			ESV4006		Digital
41)	11450.0000-11700.0000	H,V	1M76G7W	Rx			ESV4006		Digital
42)	11450.0000-11700.0000	H,V	3M52G7W	Rx			ESV4006		Digital
43)	11450.0000-11700.0000	H,V	5M77G7W	Rx			ESV4006		Digital
44)	10950.0000-11200.0000	H,V	1M76G7W	Rx			ESV4006		Digital
45)	10950.0000-11200.0000	H,V	2M41G7W	Rx			ESV4006		Digital
46)	10950.0000-11200.0000	H,V	3M52G7W	Rx			ESV4006		Digital
47)	10950.0000-11200.0000	H,V	5M77G7W	Rx			ESV4006		Digital
48)	14000.0000-14500.0000	H,V	100KG7D	Tx	37.00	23.02	ESV4996		Digital
49)	14000.0000-14500.0000	H,V	150KG7D	Tx	38.80	23.06	ESV4996		Digital
50)	14000.0000-14500.0000	H,V	1M17G7D	Tx	47.80	23.14	ESV4996		Digital
51)	14000.0000-14500.0000	H,V	1M56G7D	Tx	49.10	23.19	ESV4996		Digital
52)	14000.0000-14500.0000	H,V	200KG7D	Tx	40.00	23.01	ESV4996		Digital
53)	14000.0000-14500.0000	H,V	200KG7D	Tx	40.50	23.50	ESV4996		Digital
54)	14000.0000-14500.0000	H,V	300KG7D	Tx	41.80	23.05	ESV4996		Digital
55)	14000.0000-14500.0000	H,V	390KG7D	Tx	43.00	23.11	ESV4996		Digital



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#	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
56)	14000.0000-14500.0000	H,V	50K0G7D	Tx	34.00	23.03	ESV4996		Digital
57)	14000.0000-14500.0000	H,V	780KG7D	Tx	46.00	23.10	ESV4996		Digital
58)	11700.0000-12200.0000	H,V	1M85G7D	Rx			ESV4996		Digital
59)	11700.0000-12200.0000	H,V	1M92G7D	Rx			ESV4996		Digital
60)	11700.0000-12200.0000	H,V	3M85G7D	Rx			ESV4996		Digital
61)	11700.0000-12200.0000	H,V	5M76G7D	Rx			ESV4996		Digital
62)	11700.0000-12200.0000	H,V	7M68G7D	Rx			ESV4996		Digital
63)	11700.0000-12200.0000	H,V	8M67G7D	Rx			ESV4996		Digital
64)	11700.0000-12200.0000	H,V	200KG7D	Rx	0.00	0.00	ESV4996		Digital
65)	14000.0000-14500.0000	H,V	100KG7D	Tx	37.00	23.02	ESV6006		Digital
66)	14000.0000-14500.0000	H,V	150KG7D	Tx	38.80	23.06	ESV6006		Digital
67)	14000.0000-14500.0000	H,V	1M17G7D	Tx	47.80	23.14	ESV6006		Digital
68)	14000.0000-14500.0000	H,V	1M56G7D	Tx	49.10	23.19	ESV6006		Digital
69)	14000.0000-14500.0000	H,V	200KG7D	Tx	40.00	23.01	ESV6006		Digital
70)	14000.0000-14500.0000	H,V	300KG7D	Tx	41.80	23.05	ESV6006		Digital
71)	14000.0000-14500.0000	H,V	390KG7D	Tx	43.00	23.11	ESV6006		Digital
72)	14000.0000-14500.0000	H,V	50K0G7D	Tx	34.00	23.03	ESV6006		Digital
73)	14000.0000-14500.0000	H,V	780KG7D	Tx	46.00	23.10	ESV6006		Digital
74)	12500.0000-12750.0000	H,V	1M76G7W	Rx			ESV6006		Digital
75)	12500.0000-12750.0000	H,V	2M41G7W	Rx			ESV6006		Digital
76)	12500.0000-12750.0000	H,V	3M52G7W	Rx			ESV6006		Digital
77)	12500.0000-12750.0000	H,V	5M77G7W	Rx			ESV6006		Digital
78)	11700.0000-12200.0000	H,V	1M92G7D	Rx			ESV6006		Digital
79)	11700.0000-12200.0000	H,V	3M85G7D	Rx			ESV6006		Digital



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#	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
80)	11700.0000-12200.0000	H, V	5M76G7D	Rx			ESV6006		Digital
81)	11700.0000-12200.0000	H, V	7M68G7D	Rx			ESV6006		Digital
82)	11700.0000-12200.0000	H, V	8M67G7D	Rx			ESV6006		Digital
83)	11450.0000-11700.0000	H, V	1M76G7W	Rx			ESV6006		Digital
84)	11450.0000-11700.0000	H, V	2M41G7W	Rx			ESV6006		Digital
85)	11450.0000-11700.0000	H, V	3M52G7W	Rx			ESV6006		Digital
86)	11450.0000-11700.0000	H, V	5M77G7W	Rx			ESV6006		Digital
87)	10950.0000-11200.0000	H, V	1M76G7W	Rx			ESV6006		Digital
88)	10950.0000-11200.0000	H, V	2M41G7W	Rx			ESV6006		Digital
89)	10950.0000-11200.0000	H, V	3M52G7W	Rx			ESV6006		Digital
90)	10950.0000-11200.0000	H, V	5M77G7W	Rx			ESV6006		Digital
91)	14000.0000-14500.0000	H, V	100KG7D	Tx	37.00	23.02	ESV6009		DIGITAL
92)	14000.0000-14500.0000	H, V	150KG7D	Tx	38.80	23.06	ESV6009		DIGITAL
93)	14000.0000-14500.0000	H, V	1M17G7D	Tx	47.80	23.14	ESV6009		DIGITAL
94)	14000.0000-14500.0000	H, V	1M56G7D	Tx	49.10	23.19	ESV6009		DIGITAL
95)	14000.0000-14500.0000	H, V	200KG7D	Tx	40.00	23.01	ESV6009		DIGITAL
96)	14000.0000-14500.0000	H, V	300KG7D	Tx	41.80	23.05	ESV6009		DIGITAL
97)	14000.0000-14500.0000	H, V	390KG7D	Tx	43.00	23.11	ESV6009		DIGITAL
98)	14000.0000-14500.0000	H, V	50K0G7D	Tx	34.00	23.03	ESV6009		DIGITAL
99)	14000.0000-14500.0000	H, V	780KG7D	Tx	46.00	23.10	ESV6009		DIGITAL
100)	12500.0000-12750.0000	H, V	1M76G7W	Rx			ESV6009		DIGITAL
101)	12500.0000-12750.0000	H, V	2M41G7W	Rx			ESV6009		DIGITAL
102)	12500.0000-12750.0000	H, V	3M52G7W	Rx			ESV6009		DIGITAL
103)	12500.0000-12750.0000	H, V	5M77G7W	Rx			ESV6009		DIGITAL



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#	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
104)	11700.0000-12200.0000	H, V	1M92G7D	Rx			ESV6009		DIGITAL
105)	11700.0000-12200.0000	H, V	3M85G7D	Rx			ESV6009		DIGITAL
106)	11700.0000-12200.0000	H, V	5M76G7D	Rx			ESV6009		DIGITAL
107)	11700.0000-12200.0000	H, V	7M68G7D	Rx			ESV6009		DIGITAL
108)	11700.0000-12200.0000	H, V	8M67G7D	Rx			ESV6009		DIGITAL
109)	11450.0000-11700.0000	H, V	1M76G7W	Rx			ESV6009		DIGITAL
110)	11450.0000-11700.0000	H, V	2M41G7W	Rx			ESV6009		DIGITAL
111)	11450.0000-11700.0000	H, V	3M52G7W	Rx			ESV6009		DIGITAL
112)	11450.0000-11700.0000	H, V	5M77G7W	Rx			ESV6009		DIGITAL
113)	10950.0000-11200.0000	H, V	1M76G7W	Rx			ESV6009		DIGITAL
114)	10950.0000-11200.0000	H, V	2M41G7W	Rx			ESV6009		DIGITAL
115)	10950.0000-11200.0000	H, V	3M52G7W	Rx			ESV6009		DIGITAL
116)	10950.0000-11200.0000	H, V	5M77G7W	Rx			ESV6009		DIGITAL
117)	14000.0000-14500.0000	H, V	100KG7D	Tx	37.00	23.02	ESV6012		DIGITAL
118)	14000.0000-14500.0000	H, V	150KG7D	Tx	38.80	23.06	ESV6012		DIGITAL
119)	14000.0000-14500.0000	H, V	1M17G7D	Tx	47.80	23.14	ESV6012		DIGITAL
120)	14000.0000-14500.0000	H, V	1M56G7D	Tx	49.10	23.19	ESV6012		DIGITAL
121)	14000.0000-14500.0000	H, V	200KG7D	Tx	40.00	23.01	ESV6012		DIGITAL
122)	14000.0000-14500.0000	H, V	300KG7D	Tx	41.80	23.05	ESV6012		DIGITAL
123)	14000.0000-14500.0000	H, V	390KG7D	Tx	43.00	23.11	ESV6012		DIGITAL
124)	14000.0000-14500.0000	H, V	50K0G7D	Tx	34.00	23.03	ESV6012		DIGITAL
125)	14000.0000-14500.0000	H, V	780KG7D	Tx	46.00	23.10	ESV6012		DIGITAL
126)	12500.0000-12750.0000	H, V	1M76G7W	Rx			ESV6012		DIGITAL
127)	12500.0000-12750.0000	H, V	2M41G7W	Rx			ESV6012		DIGITAL



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128)	12500.0000-12750.0000	H,V	3M52G7W	Rx			ESV6012		DIGITAL
129)	12500.0000-12750.0000	H,V	5M77G7W	Rx			ESV6012		DIGITAL
130)	11700.0000-12200.0000	H,V	1M92G7D	Rx			ESV6012		DIGITAL
131)	11700.0000-12200.0000	H,V	3M85G7D	Rx			ESV6012		DIGITAL
132)	11700.0000-12200.0000	H,V	5M76G7D	Rx			ESV6012		DIGITAL
133)	11700.0000-12200.0000	H,V	7M68G7D	Rx			ESV6012		DIGITAL
134)	11700.0000-12200.0000	H,V	8M67G7D	Rx			ESV6012		DIGITAL
135)	11450.0000-11700.0000	H,V	1M76G7W	Rx			ESV6012		DIGITAL
136)	11450.0000-11700.0000	H,V	2M41G7W	Rx			ESV6012		DIGITAL
137)	11450.0000-11700.0000	H,V	3M52G7W	Rx			ESV6012		DIGITAL
138)	11450.0000-11700.0000	H,V	5M77G7W	Rx			ESV6012		DIGITAL
139)	10950.0000-11200.0000	H,V	1M76G7W	Rx			ESV6012		DIGITAL
140)	10950.0000-11200.0000	H,V	2M41G7W	Rx			ESV6012		DIGITAL
141)	10950.0000-11200.0000	H,V	3M52G7W	Rx			ESV6012		DIGITAL
142)	10950.0000-11200.0000	H,V	5M77G7W	Rx			ESV6012		DIGITAL
143)	14000.0000-14500.0000	H,V	840KG7W	Tx	40.62	17.40	ESV75CM		DIGITAL
144)	11700.0000-12200.0000	H,V	1M59G7W	Rx			ESV75CM		DIGITAL
145)	14000.0000-14500.0000	H,V	100KG7D	Tx	37.00	23.02	ESV9797		Digital
146)	14000.0000-14500.0000	H,V	1M17G7D	Tx	47.80	23.14	ESV9797		Digital
147)	14000.0000-14500.0000	H,V	1M56G7D	Tx	49.10	23.19	ESV9797		Digital
148)	14000.0000-14500.0000	H,V	200KG7D	Tx	40.00	23.01	ESV9797		Digital
149)	14000.0000-14500.0000	H,V	300KG7D	Tx	41.80	23.05	ESV9797		Digital
150)	14000.0000-14500.0000	H,V	390KG7D	Tx	43.00	23.11	ESV9797		Digital
151)	14000.0000-14500.0000	H,V	3M30G7W	Tx	54.94	25.94	ESV9797		Digital





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**RADIO STATION AUTHORIZATION**

Name: Harris CapRock Communications, Inc.

Call Sign: E060157

Authorization Type: Modification of License

File Number: SES-MFS-20161006-00829

Non Common Carrier

Grant date: 04/18/2017

Expiration Date: 08/14/2021

**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
152)	14000.0000-14500.0000	H,V	4M00G7W	Tx	55.80	25.94	ESV9797		Digital
153)	14000.0000-14500.0000	H,V	50K0G7D	Tx	34.00	23.03	ESV9797		Digital
154)	14000.0000-14500.0000	H,V	780KG7D	Tx	46.00	23.10	ESV9797		Digital
155)	11700.0000-12200.0000	H,V	150KG7D	Rx			ESV9797		Digital
156)	11700.0000-12200.0000	H,V	1M92G7D	Rx			ESV9797		Digital
157)	11700.0000-12200.0000	H,V	27M0G7W	Rx			ESV9797		Digital
158)	11700.0000-12200.0000	H,V	3M85G7D	Rx			ESV9797		Digital
159)	11700.0000-12200.0000	H,V	5M76G7D	Rx			ESV9797		Digital
160)	11700.0000-12200.0000	H,V	7M68G7D	Rx			ESV9797		Digital
161)	11700.0000-12200.0000	H,V	8M67G7D	Rx			ESV9797		Digital
162)	14000.0000-14500.0000	H,V	3M00G7W	Tx	44.29	15.50	INEL60CM		DIGITAL
163)	14000.0000-14500.0000	H,V	567KG7W	Tx	37.22	15.71	INEL60CM		DIGITAL
164)	11700.0000-12200.0000	H,V	2M30G7W	Rx			INEL60CM		DIGITAL
165)	14000.0000-14500.0000	H,V	1M50G7W	Tx	44.78	19.33	INTE83CM		DIGITAL
166)	14000.0000-14500.0000	H,V	248KG7W	Tx	37.80	19.28	INTE83CM		DIGITAL
167)	14000.0000-14500.0000	H,V	2M05G7W	Tx	44.13	17.03	INTE83CM		DIGITAL
168)	11700.0000-12200.0000	H,V	2M30G7W	Rx			INTE83CM		DIGITAL
169)	14000.0000-14500.0000	H,V	1M1G7D	Tx	42.50	17.84	ORBIT7103		DIGITAL
170)	14000.0000-14500.0000	H,V	4M68G7D	Tx	48.50	17.81	ORBIT7103		DIGITAL
171)	11700.0000-12200.0000	H,V	8M67G7D	Rx			ORBIT7103		DIGITAL
172)	5925.0000-6425.0000	H,V	1M00G7D	Tx	58.30	34.32	ST5000C		UP TO 32 APSK
173)	5925.0000-6425.0000	H,V	20M0G7D	Tx	61.40	24.40	ST5000C		UP TO 32 APSK
174)	3700.0000-4200.0000	H,V	1M00G7D	Rx			ST5000C		UP TO 32 APSK
175)	3700.0000-4200.0000	H,V	20M0G7D	Rx			ST5000C		UP TO 32 APSK



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Call Sign: E060157

Authorization Type: Modification of License

File Number: SES-MFS-20161006-00829

Non Common Carrier

Grant date: 04/18/2017

Expiration Date: 08/14/2021

**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
176)	29250.0000-30000.0000	H, V	1M00G7D	Tx	69.40	45.40	ST5000KA		UP TO 32 APSK
177)	29250.0000-30000.0000	H, V	40M0G7D	Tx	69.40	29.40	ST5000KA		UP TO 32 APSK
178)	28600.0000-29100.0000	H, V	1M00G7D	Tx	69.40	45.40	ST5000KA		UP TO 32 APSK
179)	28600.0000-29100.0000	H, V	40M0G7D	Tx	69.40	29.40	ST5000KA		UP TO 32 APSK
180)	28350.0000-28600.0000	H, V	1M00G7D	Tx	69.40	45.40	ST5000KA		UP TO 32 APSK
181)	28350.0000-28600.0000	H, V	40M0G7D	Tx	69.40	29.40	ST5000KA		UP TO 32 APSK
182)	27600.0000-28400.0000	H, V	1M00G7D	Tx	69.40	45.40	ST5000KA		UP TO 32 APSK
183)	27600.0000-28400.0000	H, V	40M0G7D	Tx	69.40	29.40	ST5000KA		UP TO 32 APSK
184)	19700.0000-20200.0000	H, V	1M00G7D	Rx			ST5000KA		UP TO 32 APSK
185)	19700.0000-20200.0000	H, V	40M0G7D	Rx			ST5000KA		UP TO 32 APSK
186)	18800.0000-19300.0000	H, V	1M00G7D	Rx			ST5000KA		UP TO 32 APSK
187)	18800.0000-19300.0000	H, V	40M0G7D	Rx			ST5000KA		UP TO 32 APSK
188)	18300.0000-18800.0000	H, V	1M00G7D	Rx			ST5000KA		UP TO 32 APSK
189)	18300.0000-18800.0000	H, V	40M0G7D	Rx			ST5000KA		UP TO 32 APSK
190)	17800.0000-18600.0000	H, V	1M00G7D	Rx			ST5000KA		UP TO 32 APSK
191)	17800.0000-18600.0000	H, V	40M0G7D	Rx			ST5000KA		UP TO 32 APSK
192)	14000.0000-14500.0000	H, V	1M00G7D	Tx	53.40	29.40	ST5000KU		UP TO 32 APSK
193)	14000.0000-14500.0000	H, V	20M0G7D	Tx	66.40	29.40	ST5000KU		UP TO 32 APSK
194)	11700.0000-12200.0000	H, V	20M0G7D	Rx			ST5000KU		UP TO 32 APSK
195)	11700.0000-12200.0000	H, V	1M00G7D	Rx	0.00		ST5000KU		UP TO 32 APSK



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Authorization Type: Modification of License

File Number: SES-MFS-20161006-00829

Non Common Carrier

Grant date: 04/18/2017

Expiration Date: 08/14/2021

**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)	11700.0000-12200.0000	61.5W	148.0W	05.0	05.0	128.1	250.8		ESV4996
2)	14000.0000-14500.0000	61.5W	148.0W	05.0	05.0	128.1	250.8	-26.9	ESV4996
3)	11700.0000-12200.0000	19.0W	168.0W	05.0	05.0	098.0	262.0	0	ESV4996
4)	14000.0000-14500.0000	19.0W	168.0W	05.0	05.0	098.0	262.0	-25.6	ESV4996
5)	14000.0000-14500.0000	61.5W	148.0W	05.0	05.0	128.1	250.8	-27.2	ESV6012
6)	11700.0000-12200.0000	61.5W	148.0W	05.0	05.0	128.1	250.8		ESV6012
7)	14000.0000-14500.0000	61.5W	148.0W	05.0	05.0	128.1	250.8	-27.2	ESV6009
8)	11700.0000-12200.0000	61.5W	148.0W	05.0	05.0	128.1	250.8		ESV6009
9)	11700.0000-12200.0000	61.5W	148.0W	05.0	05.0	128.1	250.8		ESV4003
10)	14000.0000-14500.0000	61.5W	148.0W	05.0	05.0	128.1	250.8	-25.65	ESV4003
11)	11700.0000-12200.0000	61.5W	148.0W	05.0	05.0	128.1	250.8		ESV4006
12)	14000.0000-14500.0000	61.5W	148.0W	05.0	05.0	128.1	250.8	-25.65	ESV4006
13)	11700.0000-12200.0000	61.5W	148.0W	05.0	05.0	128.1	250.8		ESV6006
14)	14000.0000-14500.0000	61.5W	148.0W	05.0	05.0	128.1	250.8	-27.2	ESV6006
15)	11700.0000-12200.0000	61.5W	148.0W	05.0	05.0	128.1	250.8		ESV9797
16)	14000.0000-14500.0000	61.5W	148.0W	05.0	05.0	128.1	250.8	31.45	ESV9797
17)	14000.0000-14500.0000			05.0	05.0			-31.6	ESV75CM
18)	11700.0000-12200.0000								ESV75CM
19)	14000.0000-14500.0000								ORBIT7103
20)	11700.0000-12200.0000								ORBIT7103
21)	14000.0000-14500.0000			05.0	05.0			-32.7	INEL60CM
22)	11700.0000-12200.0000			05.0	05.0				INEL60CM
23)	14000.0000-14500.0000			05.0	05.0			-30.56	INTE83CM
24)	11700.0000-12200.0000			05.0	05.0				INTE83CM
25)	5925.0000-6425.0000	19.0W	168.0W	10.0	10.0	098.0	262.0	0.32	ST5000C
26)	3700.0000-4200.0000	19.0W	168.0W	10.0	10.0	098.0	262.0		ST5000C
27)	14000.0000-14500.0000	19.0W	168.0W	10.0	10.0	098.0	262.0	-10.08	ST5000KU
28)	11700.0000-12200.0000	19.0W	168.0W	10.0	10.0	098.0	262.0		ST5000KU
29)	27600.0000-28400.0000	NGSO		05.0	05.0	100.0	260.0	4.7	ST5000KA
30)	28350.0000-28600.0000	19.0W	168.0W	10.0	10.0	100.0	260.0	-2.8	ST5000KA
31)	28600.0000-29100.0000	NGSO		05.0	05.0	100.0	260.0	4.7	ST5000KA
32)	29250.0000-30000.0000	19.0W	168.0W	10.0	10.0	100.0	260.0	-2.8	ST5000KA
33)	17800.0000-18600.0000	NGSO		05.0	05.0	100.0	260.0		ST5000KA
34)	17800.0000-18600.0000	NGSO		05.0	05.0	100.0	260.0		ST5000KA



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**RADIO STATION AUTHORIZATION**

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Call Sign: E060157

Authorization Type: Modification of License

File Number: SES-MFS-20161006-00829

Non Common Carrier

Grant date: 04/18/2017

Expiration Date: 08/14/2021

**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		
35)	18300.0000-18800.0000	19.0W	-168.0W	10.0	-10.0	100.0	-260.0		ST5000KA
36)	18800.0000-19300.0000	NGSO		05.0	-05.0	100.0	-260.0		ST5000KA
37)	19700.0000-20200.0000	19.0W	-168.0W	10.0	-10.0	100.0	-260.0		ST5000KA

**D) Points of Communications**

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

- 1) ESV to EUTELSAT 115WA (S2589) @ 114.9 degrees W.L. (formerly SATMEX 5) (Mexico-licensed)
- 2) ESV to Permitted Space Station List
- 3) Oceans to Eutelsat 113WA (S2695) @ 113 degrees W.L. (formerly SATMEX 6) (Mexico-licensed)
- 4) Oceans to EUTELSAT 115WA (S2589) @ 114.9 degrees W.L. (formerly SATMEX 5) (Mexico-licensed)
- 5) Oceans to TELESTAR 11 (used to be ORION F1) @ 37.5 W.L. (U.S.-licensed)
- 6) SEATEL 75CM(USAT30) to GALAXY 26 satellite @ 93 degrees W.L. (U.S.-licensed)
- 7) SEATEL 75CM(USAT30) to Permitted Space Station List
- 8) SEATEL 75CM(USAT30) to ESTRELA DO SUL 1 (S2474) @ 63 degrees W.L. (End of life 1-17-2011)
- 9) ORBIT 7103 to TELSTAR 11N (S2357) @ 37.55 degrees W.L. (U.S.-licensed)
- 10) ORBIT 7103 to Permitted Space Station List
- 11) INTELLIAN V60 to GALAXY 25 (S2154) satellite @ 93.1 W.L. (U.S.-licensed)
- 12) INTELLIAN V60 to Permitted Space Station List
- 13) INTELLIAN V80 to GALAXY 25 (S2154) satellite @ 93.1 W.L. (U.S.-licensed)
- 14) INTELLIAN V80 to Permitted Space Station List
- 15) ST5000-2.4 to Permitted Space Station List
- 16) ST5000-2.4 to O3b Limited NGSO satellite system (S2935) (UK-licensed)

**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)
Oceans	ESV4003	150	1	Seatel	4003		10 AMSL	
Max Gains(s) :		39.7 dBi @	11.8500 GHz	41.2 dBi @	14.2500 GHz			
Maximum total input power at antenna flange (Watts) =					3.02			
Maximum aggregate output EIRP for all carriers (dBW) =					46.00			



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File Number: SES-MFS-20161006-00829

Non Common Carrier

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Expiration Date: 08/14/2021

**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)
Oceans	ESV4006	150	1	Seatel	4006		10 AMSL	
Max Gains(s):		39.7 dBi @	11.8500 GHz	41.2 dBi @	14.2500 GHz			
Maximum total input power at antenna flange (Watts) =						3.02		
Maximum aggregate output EIRP for all carriers (dBW) =						46.00		
Oceans	ESV4996	150	1.2	Seatel	4996		10 AMSL	
Max Gains(s):								
Maximum total input power at antenna flange (Watts) =						4.62		
Maximum aggregate output EIRP for all carriers (dBW) =						49.10		
ESV	ESV4996	1	1.2	Seatel	4996	0	0 AGL/ 10 AMSL	
Max Gains(s):		41.3 dBi @	12.0000 GHz	42.5 dBi @	14.0000 GHz	40.8 dBi @		
		12.0000 GHz	42.5 dBi @	14.2500 GHz				
Maximum total input power at antenna flange (Watts) =						1.75		
Maximum aggregate output EIRP for all carriers (dBW) =						44.90		
Oceans	ESV6006	150	1.5	Seatel	6006		10 AMSL	
Max Gains(s):		42.5 dBi @	11.8500 GHz	42.8 dBi @	14.2500 GHz			
Maximum total input power at antenna flange (Watts) =						4.32		
Maximum aggregate output EIRP for all carriers (dBW) =						49.10		
ESV	ESV6009	150	1.5	SEATEL	6009	0	3 AGL	
Max Gains(s):		42.5 dBi @	11.8500 GHz	42.8 dBi @	14.2500 GHz			
Maximum total input power at antenna flange (Watts) =						4.32		
Maximum aggregate output EIRP for all carriers (dBW) =						49.10		
ESV	ESV6012	150	1.5	SEATEL	6012	0	3 AGL	
Max Gains(s):		42.5 dBi @	11.8500 GHz	42.8 dBi @	14.2500 GHz			
Maximum total input power at antenna flange (Watts) =						4.32		
Maximum aggregate output EIRP for all carriers (dBW) =						49.10		



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**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)
SEATEL 75CM (USAT30)	ESV75CM	500	0.75	SEATEL	USAT 30			
Max Gains(s):		38.3 dBi @	12.0000 GHz	39.0 dBi @	14.2500 GHz			
Maximum total input power at antenna flange (Watts) =						5.00		
Maximum aggregate output EIRP for all carriers (dBW) =						46.00		
Oceans	ESV9797	150	2.4	Seatel	9797		0 AMSL	
Max Gains(s):		46.6 dBi @	11.8500 GHz	47.0 dBi @	14.2500 GHz			
Maximum total input power at antenna flange (Watts) =						20.00		
Maximum aggregate output EIRP for all carriers (dBW) =						60.00		
INTELLIAN V6	INEL60CM	500	0.6	INTELLIAN TECHNOLOGIES	INTELLIAN V60			
Max Gains(s):		38.5 dBi @	14.2500 GHz	38.5 dBi @	11.8500 GHz			
Maximum total input power at antenna flange (Watts) =						4.00		
Maximum aggregate output EIRP for all carriers (dBW) =						44.52		
INTELLIAN V8	INTE83CM	500	0.83	INTELLIAN	INTELLIAN V80			
Max Gains(s):		39.6 dBi @	14.2500 GHz	38.3 dBi @	12.2000 GHz			
Maximum total input power at antenna flange (Watts) =						8.00		
Maximum aggregate output EIRP for all carriers (dBW) =						48.63		
ORBIT 7103	ORBIT7103	250	1.2	ORBIT	7103			
Max Gains(s):		41.0 dBi @	11.0000 GHz	42.6 dBi @	14.2500 GHz			
Maximum total input power at antenna flange (Watts) =						14.00		
Maximum aggregate output EIRP for all carriers (dBW) =						54.10		
ST5000-2.4	ST5000C	1000	2.4	HARRIS CAPROCK	ST5000			
Max Gains(s):		35.5 dBi @	3.9500 GHz	38.0 dBi @	6.1375 GHz			
Maximum total input power at antenna flange (Watts) =						218.00		
Maximum aggregate output EIRP for all carriers (dBW) =						61.40		



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**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)
ST5000-2.4	ST5000KA	1000	2.4	HARRIS CAPROCK	ST5000			
Max Gains(s):		54.7 dBi @	28.3600 GHz	55.2 dBi @	30.0000 GHz			
Maximum total input power at antenna flange (Watts) =						26.40		
Maximum aggregate output EIRP for all carriers (dBW) =						69.40		
ST5000-2.4	ST5000KU	1000	2.4	HARRIS CAPROCK	ST5000			
Max Gains(s):		43.5 dBi @	14.1250 GHz	45.5 dBi @	11.7000 GHz			
Maximum total input power at antenna flange (Watts) =						195.00		
Maximum aggregate output EIRP for all carriers (dBW) =						66.40		

**F) Remote Control Point:**

ESV	4400 S. Sam Houston Okwy. E. Houston, Harris, TX 77048 832-668-2753	Call Sign: E910609
INTELLIAN V60	4400 S. SAM HOUSTON PKWY E., 0.6M. (500 UNITS) HOUSTON, HARRIS, TX 77048 832-668-2753	Call Sign: E030279
INTELLIAN V80	4400 S. SAM HOUSTON PKWY E., 0.83M. (500 UNITS) HOUSTON, HARRIS, TX 77048 832-668-2753	Call Sign: E030279
ORBIT 7103	4400 S. SAM HOUSTON PKWY HOUSTON, HARRIS, TX 77048 832-668-2753	Call Sign:



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**F) Remote Control Point:**

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Oceans	4400 S. Sam Houston Pkwy E. Houston, Harris, TX 77048 832-668-2600	Call Sign: E060157
SEATEL 75CM(USAT3C	4400 S. SAM HOUSTON PKWY HOUSTON, HARRIS, TX 77048 832-668-2589	Call Sign: E030253
SEATEL 75CM(USAT3C	4400 S. SAM HOUSTON PKWY HOUSTON, HARRIS, TX 77048 832-668-2589	Call Sign: E030279
ST5000-2.4	4400 S. SAM HOUSTON PKWY. E HOUSTON, HARRIS, TX 77046 832-668-2775	Call Sign: E060157

**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.
- 102 --- 24 Hour Contact: Applicant has provided the name and telephone number of a contact person in the United States, available seven days a week, twenty-four hours a day, for cessation of emissions from suspected source of interference in the event of need to resolve interference issues, on direction from authority with jurisdiction for licensing in the area of operation.
- 105 --- Subject to Rule Making: This license is subject to the outcome of any future rule making concerning ESV operations. Grant of this authorization shall not prejudice the outcome of any rulemaking.





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Expiration Date: 08/14/2021

## H) Special and General Provisions

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

212 --- In the 10.95-11.2 and 11.45-11.7 GHz bands, satellite points of communication are limited to the SATMEX-5 @ 116.8 W.L. and SATMEX-6 @ 113 W.L. orbital locations.

366 --- ESV in motion cannot claim protection from transmissions of terrestrial services operating in accordance with the Radio Regulations.

367 --- The licensee must assure that no harmful interference will come to US operations broadcast satellite downlink operations from the FSS downlinks in the 12.5-12.75 GHz band.

368 --- Operations within territorial waters of other administrations must follow the local rules pertaining to ESVs.

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).

90013 --- The licensee shall not operate in the band 14.0-14.2 GHz within 125 km of the NASA TDRSS facilities on Guam (located at latitude 13°36'55" N, longitude 144°51'22" E) or White Sands, New Mexico (located at latitude 32°20'59" N, longitude 106°36'31" W and latitude 32°32'40" N, longitude 106°36'48" W), or any future TDRSS facility NTIA notifies to the FCC, unless and until the licensee enters into an agreement with NASA that NTIA has approved. The licensee must conform its operations to the terms of any coordination agreement with the NASA and must file a copy of the agreement with the Commission within 30 days of execution.

90014 --- The licensee shall not operate in the band 14.47-14.50 GHz within (a) 45 km of the radio observatory on St. Croix, Virgin Islands (located at latitude 17°46' N, longitude 64°35' W); (b) 125 km of the radio observatory on Mauna Kea, Hawaii (located at latitude 19°48' N, longitude 155°28' W); and (c) 90 km of the Arecibo Observatory on Puerto Rico (located at latitude 18°20'46" W, longitude 66°45'11" N) unless and until the licensee enters into an agreement with the National Science Foundation that has been approved by NTIA. The licensee must conform its operations to the terms of any coordination agreement with the National Science Foundation and must file a copy of the agreement with the Commission within 30 days of execution.

90285 --- Operations in international waters and in territorial waters of other countries must be in compliance with the applicable laws, regulations, and licensing procedures of other countries, as well as with the conditions of this authorization.

90295 --- The licensee shall not operate in the band 14.0-14.2 GHz within 125 kilometers (km) of the NASA TDRSS facilities in Blossom Point, Maryland (latitude 38° 25' 44" N.L., longitude 77° 05' 02" W.L.), unless and until the licensee enters into an agreement with NASA that NTIA has approved. The licensee must conform its operation with the Commission within 30 days of execution.



**UNITED STATES OF AMERICA**  
**FEDERAL COMMUNICATIONS COMMISSION**  

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**RADIO STATION AUTHORIZATION**

Name: Harris CapRock Communications, Inc.

Call Sign: E060157

Authorization Type: Modification of License

File Number: SES-MFS-20161006-00829

Non Common Carrier

Grant date: 04/18/2017

Expiration Date: 08/14/2021

## H) Special and General Provisions

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

- 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](http://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.
- 90402 --- Harris Cap Rock is granted a waiver of the U.S. Table of Allocations, 47 CFR § 2.106, and the Commission's Ka-band Plan, see Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Services and for Fixed Satellite Services, First Report and Order and Fourth Notice of Proposed Rulemaking, 11 FCC Rcd 19005 (1996). Harris Cap Rock is authorized to operate with the O3b Limited NGSO FSS system (Call Sign S2935) in the 27.6-28.4 GHz, 28.6-29.1 GHz (Earth-to-space), and the 17.8-18.6 GHz, 18.8-19.3 GHz (space-to-Earth) frequency bands for maritime use, on a non-interference basis, while stationary and in motion, that is Harris Cap Rock must not cause harmful interference to, and must not claim protection from interference caused to it by, any other lawfully operating station, and must cease transmission(s) immediately upon notice of such interference. Based on the information on file with the Commission, the proposed operations do not pose a risk of interference to other users of the band. We note that, contrary to Harris Cap Rock's assertion, its terminals have no grandfathered status in the 27.6-28.35 GHz band under the Spectrum Frontiers Order, 31 FCC Rcd 8014, 8036 (2016).
- 90403 --- Harris Cap Rock's operations with the O3b Limited NGSO FSS system are subject to the terms and conditions in O3b Limited, IBFS File Nos. SAT-LOI-20141029-00118 and SAT-AMD-20150115-00004 (Granted Jan. 22, 2015).
- 90404 --- Harris Cap Rock is granted a waiver of Commission's Ka-band Plan, see Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Services and for Fixed Satellite Services, First Report and Order and Fourth Notice of Proposed Rulemaking, 11 FCC Rcd 19005 (1996). Harris Cap Rock is authorized to operate with space stations on the Commission's Space Station Permitted List using the 28.35-28.6 GHz, 29.25-30.0 GHz (Earth-to-space) and 18.3-18.8 GHz, 19.7-20.2 GHz (space-to-Earth) frequency bands for maritime use, on a non-interference basis, while stationary and in motion, that is Harris Cap Rock must not cause harmful interference to, and must not claim protection from interference caused to it by, any other lawfully operating station, and must cease transmission(s) immediately upon notice of such interference. Based on the information on file with the Commission, the proposed operations do not pose a risk of interference to other users of the band.



UNITED STATES OF AMERICA  
FEDERAL COMMUNICATIONS COMMISSION  
**RADIO STATION AUTHORIZATION**

Name: Harris CapRock Communications, Inc.

Call Sign: E060157

Authorization Type: Modification of License

File Number: SES-MFS-20161006-00829

Non Common Carrier

Grant date: 04/18/2017

Expiration Date: 08/14/2021

## H) Special and General Provisions

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

900407 --- The Permitted Space Station List (Permitted List) is a list of all geostationary space stations providing fixed-satellite service pursuant to a Commission license or grant of U.S. market access in the following bands:  
3600-4200 MHz (space-to-Earth)  
5850-6725 MHz (Earth-to-space)  
10.95-11.2 GHz (space-to-Earth)  
11.45-12.2 GHz (space-to-Earth)  
13.75-14.5 GHz (Earth-to-space)  
18.3-18.8 GHz (space-to-Earth)  
19.7-20.2 GHz (space-to-Earth)  
24.75-25.25 GHz (Earth-to-space)  
28.35-28.6 GHz (Earth-to-space)  
29.25-30 GHz (Earth-to-space).

Earth stations with "Permitted List" designated as a point of communication may access any space station on the Permitted List, provided the operations comply with the applicable "routine" uplink and downlink limits, are within the specific frequency bands authorized in the earth station license, have completed coordination with terrestrial stations pursuant to §25.203, and otherwise comply with all terms and conditions of both the earth station license and the space station grant.



**UNITED STATES OF AMERICA**  
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**RADIO STATION AUTHORIZATION**

Name: Harris CapRock Communications, Inc.

Call Sign: E060157

Authorization Type: Modification of License

File Number: SES-MFS-20161006-00829

Non Common Carrier

Grant date: 04/18/2017

Expiration Date: 08/14/2021

**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.

Licenses 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.