UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION

RADIO STATION AUTHORIZATION

Name: Comsat, Inc.
Call Sign: E930320
Authorization Type: Modification of License
File Number: SES-MOD-20151009-00732
Common Carrier **Grant date:** 04/25/2016 **Expiration Date:** 08/06/2018

Nature of Service: Earth Stations on-board Vessels

Class of Station: Earth Stations on-board Vessels/VSAT

A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	NAD	Special Provisions (Refer to Section H)
1)	Hub (4.5m)	7676 PINE GROVE ROAD SANTA PAULA, VENTURA, CA 93061	34°24'5.0"N	119°4'26.0"W	228.6	83	
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209					
2)	REMOTE-1 ESV	250 (1.0 m antennas) CONUS,				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.					
3)	REMOTE-2 ESV	250 (1.0 m antennas) CONUS,				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.					
4)	REMOTE-3 ESV	50 (1.2 m antennas) CONUS,				NA	
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209					
5)	REMOTE-4 ESV	350 (1.5 m antennas) CONUS,				NA	
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209					
6)	REMOTE-5 ESV	500 (1.05M. antennas) CONUS,				NA	
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209					

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A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	NAD	Special Provisions (Refer to Section H)
7)	SAPA19 (6.3M)	7676 PINE GROVE ROAD SANTA PAULA, VENTURA, CA 93060	34°24'5.0"N	119°4'29.4"W	228.6	83	

Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209

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 6, 2003 (3 AM Eastern Standard Time) and ending August 6, 2018 (3 AM Eastern Standard Time) . The required date of completion of construction and commencement of operation is April 25, 2017 (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	44K8G1W	Tx	34.40	23.90	ESV-4003A		SCPC USING QPSK AND BPSK MODULATION
2)	14000.0000-14500.0000	H,V	538KG1W	Tx	45.20	23.90	ESV-4003A		SCPC USING QPSK AND BPSK MODULATION
3)	14000.0000-14500.0000	H,V	89K6G1W	Tx	37.40	23.90	ESV-4003A		SCPC USING QPSK AND BPSK MODULATION
4)	14000.0000-14500.0000	H,V	227KG7W	Tx	41.50	23.90	ESV-4003A		TDM/TDMA USING QPSK AND BPSK MODULATION
5)	14000.0000-14500.0000	H,V	340KG7W	Tx	43.20	23.90	ESV-4003A		TDM/TDMA USING QPSK AND BPSK MODULATION
6)	14000.0000-14500.0000	H,V	378KG7W	Tx	43.60	23.90	ESV-4003A		TDM/TDMA USING QPSK AND BPSK MODULATION
7)	14000.0000-14500.0000	H,V	454KG7W	Tx	44.50	23.90	ESV-4003A		TDM/TDMA USING QPSK AND BPSK MODULATION
8)	14000.0000-14500.0000	H,V	908KG7W	Tx	45.80	22.20	ESV-4003A		TDM/TDMA USING QPSK AND BPSK MODULATION
9)	14000.0000-14500.0000	H,V	1M40G7W	Tx	45.80	20.30	ESV-4003A		DVB/MFTDMA USING QPSK AND BPSK MODULATION

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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
10)	14000.0000-14500.0000	H,V	316KG7W	Tx	42.80	23.90	ESV-4003A		DVB/MFTDMA USING QPSK AND BPSK MODULATION
11)	14000.0000-14500.0000	H,V	607KG7W	Tx	45.70	23.90	ESV-4003A		DVB/MFTDMA USING QPSK AND BPSK MODULATION
12)	11450.0000-12200.0000	H,V	44K8G1W	Rx			ESV-4003A		SCPC USING QPSK AND BPSK MODULATION
13)	11450.0000-12200.0000	H,V	717KG1W	Rx			ESV-4003A		SCPC USING QPSK AND BPSK MODULATION
14)	11450.0000-12200.0000	H,V	89K6G1W	Rx			ESV-4003A		SCPC USING QPSK AND BPSK MODULATION
15)	11450.0000-12200.0000	H,V	151KG7W	Rx			ESV-4003A		TDM/TDMA USING QPSK AND BPSK MODULATION
16)	11450.0000-12200.0000	H,V	54M0G7W	Rx			ESV-4003A		TDM/TDMA USING QPSK AND BPSK MODULATION
17)	11450.0000-12200.0000	H,V	2M60G7W	Rx			ESV-4003A		DVB/MFTDMA USING QPSK AND BPSK MODULATION
18)	11450.0000-12200.0000	H,V	54M0G7W	Rx			ESV-4003A		DVB/MFTDMA USING QPSK AND BPSK MODULATION
19)	10950.0000-11200.0000	H,V	44K8G1W	Rx			ESV-4003A		SCPC USING QPSK AND BPSK MODULATION
20)	10950.0000-11200.0000	H,V	717KG1W	Rx			ESV-4003A		SCPC USING QPSK AND BPSK MODULATION
21)	10950.0000-11200.0000	H,V	89K6G1W	Rx			ESV-4003A		SCPC USING QPSK AND BPSK MODULATION
22)	10950.0000-11200.0000	H,V	151KG7W	Rx			ESV-4003A		TDM/TDMA USING QPSK AND BPSK MODULATION
23)	10950.0000-11200.0000	H,V	54M0G7W	Rx			ESV-4003A		TDM/TDMA USING QPSK AND BPSK MODULATION
24)	10950.0000-11200.0000	H,V	2M60G7W	Rx			ESV-4003A		DVB/MFTDMA USING QPSK AND BPSK MODULATION
25)	10950.0000-11200.0000	H,V	54M0G7W	Rx			ESV-4003A		DVB/MFTDMA USING QPSK AND BPSK MODULATION
26)	14000.0000-14500.0000	H,V	44K8G1W	Tx	34.40	23.90	ESV-4006		SCPC USING QPSK AND BPSK MODULATION
27)	14000.0000-14500.0000	H,V	717KG1W	Tx	46.40	23.90	ESV-4006		SCPC USING QPSK AND BPSK MODULATION

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The General Provision 1010 applies to all receiving frequency bands.
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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
28)	14000.0000-14500.0000	H,V	89K6G1W	Tx	37.40	23.90	ESV-4006		SCPC USING QPSK AND BPSK MODULATION
29)	14000.0000-14500.0000	H,V	227KG7W	Tx	41.50	23.90	ESV-4006		TDM/TDMA USING QPSK AND BPSK MODULATION
30)	14000.0000-14500.0000	H,V	340KG7W	Tx	43.20	23.90	ESV-4006		TDM/TDMA USING QPSK AND BPSK MODULATION
31)	14000.0000-14500.0000	H,V	378KG7W	Tx	43.60	23.90	ESV-4006		TDM/TDMA USING QPSK AND BPSK MODULATION
32)	14000.0000-14500.0000	H,V	454KG7W	Tx	44.50	23.90	ESV-4006		TDM/TDMA USING QPSK AND BPSK MODULATION
33)	14000.0000-14500.0000	H,V	908KG7W	Tx	47.40	23.80	ESV-4006		TDM/TDMA USING QPSK AND BPSK MODULATION
34)	14000.0000-14500.0000	H,V	1M40G7W	Tx	47.40	21.90	ESV-4006		DVB/MFTDMA USING QPSK AND BPSK MODULATION
35)	14000.0000-14500.0000	H,V	316KG7W	Tx	43.80	23.90	ESV-4006		DVB/MFTDMA USING QPSK AND BPSK MODULATION
36)	14000.0000-14500.0000	H,V	607KG7W	Tx	45.70	23.90	ESV-4006		DVB/MFTDMA USING QPSK AND BPSK MODULATION
37)	11450.0000-12200.0000	H,V	44K8G1W	Rx			ESV-4006		SCPC USING QPSK AND BPSK MODULATION
38)	11450.0000-12200.0000	H,V	717KG1W	Rx			ESV-4006		SCPC USING QPSK AND BPSK MODULATION
39)	11450.0000-12200.0000	H,V	89K6G1W	Rx			ESV-4006		SCPC USING QPSK AND BPSK MODULATION
40)	11450.0000-12200.0000	H,V	151KG7W	Rx			ESV-4006		TDM/TDMA USING QPSK AND BPSK MODULATION
41)	11450.0000-12200.0000	H,V	54M0G7W	Rx			ESV-4006		TDM/TDMA USING QPSK AND BPSK MODULATION
42)	11450.0000-12200.0000	H,V	2M60G7W	Rx			ESV-4006		DVB/MFTDMA USING QPSK AND BPSK MODULATION
43)	11450.0000-12200.0000	H,V	54M0G7W	Rx			ESV-4006		DVB/MFTDMA USING QPSK AND BPSK MODULATION
44)	10950.0000-11200.0000	H,V	44K8G1W	Rx			ESV-4006		SCPC USING QPSK AND BPSK MODULATION
45)	10950.0000-11200.0000	H,V	717KG1W	Rx			ESV-4006		SCPC USING QPSK AND BPSK MODULATION

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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
46)	10950.0000-11200.0000	H,V	89K6G1W	Rx			ESV-4006		SCPC USING QPSK AND BPSK MODULATION
47)	10950.0000-11200.0000	H,V	151KG7W	Rx			ESV-4006		TDM/TDMA USING QPSK AND BPSK MODULATION
48)	10950.0000-11200.0000	H,V	54M0G7W	Rx			ESV-4006		TDM/TDMA USING QPSK AND BPSK MODULATION
49)	10950.0000-11200.0000	H,V	2M60G7W	Rx			ESV-4006		DVB/MFTDMA USING QPSK AND BPSK MODULATION
50)	10950.0000-11200.0000	H,V	54M0G7W	Rx			ESV-4006		DVB/MFTDMA USING QPSK AND BPSK MODULATION
51)	14000.0000-14500.0000	H,V	1M43G1W	Tx	51.10	26.60	ESV-4996T		SCPC USING QPSK AND BPSK MODULATION
52)	14000.0000-14500.0000	H,V	44K8G1W	Tx	36.10	25.60	ESV-4996T		SCPC USING QPSK AND BPSK MODULATION
53)	14000.0000-14500.0000	H,V	717KG1W	Tx	48.10	25.60	ESV-4996T		SCPC USING QPSK AND BPSK MODULATION
54)	14000.0000-14500.0000	H,V	89K6G1W	Tx	39.10	25.60	ESV-4996T		SCPC USING QPSK AND BPSK MODULATION
55)	11450.0000-12200.0000	H,V	1M43G1W	Rx			ESV-4996T		SCPC USING QPSK AND BPSK MODULATION
56)	11450.0000-12200.0000	H,V	44K8G1W	Rx			ESV-4996T		SCPC USING QPSK AND BPSK MODULATION
57)	11450.0000-12200.0000	H,V	717KG1W	Rx			ESV-4996T		SCPC USING QPSK AND BPSK MODULATION
58)	11450.0000-12200.0000	H,V	89K6G1W	Rx			ESV-4996T		SCPC USING QPSK AND BPSK MODULATION
59)	10950.0000-11200.0000	H,V	1M43G1W	Rx			ESV-4996T		SCPC USING QPSK AND BPSK MODULATION
60)	10950.0000-11200.0000	H,V	44K8G1W	Rx			ESV-4996T		SCPC USING QPSK AND BPSK MODULATION
61)	10950.0000-11200.0000	H,V	717KG1W	Rx			ESV-4996T		SCPC USING QPSK AND BPSK MODULATION
62)	10950.0000-11200.0000	H,V	89K6G1W	Rx			ESV-4996T		SCPC USING QPSK AND BPSK MODULATION
63)	14000.0000-14500.0000	H,V	1M43G1W	Tx	52.00	29.50	ESV-6006		SCPC USING QPSK AND BPSK MODULATION

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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
64)	14000.0000-14500.0000	H,V	2M35G1W	Tx	52.00	29.50	ESV-6006		SCPC USING QPSK AND BPSK MODULATION
65)	14000.0000-14500.0000	H,V	44K8G1W	Tx	40.00	29.50	ESV-6006		SCPC USING QPSK AND BPSK MODULATION
66)	14000.0000-14500.0000	H,V	717KG1W	Tx	52.00	29.50	ESV-6006		SCPC USING QPSK AND BPSK MODULATION
67)	14000.0000-14500.0000	H,V	89K6G1W	Tx	43.00	29.50	ESV-6006		SCPC USING QPSK AND BPSK MODULATION
68)	14000.0000-14500.0000	H,V	194KG7W	Tx	46.40	29.50	ESV-6006		SCPC AND TDM/TDMA USING QPSK AND BPSK MODULATION
69)	14000.0000-14500.0000	H,V	291KG7W	Tx	48.10	29.50	ESV-6006		SCPC AND TDM/TDMA USING QPSK AND BPSK MODULATION
70)	14000.0000-14500.0000	H,V	388KG7W	Tx	49.10	29.50	ESV-6006		SCPC AND TDM/TDMA USING QPSK AND BPSK MODULATION
71)	14000.0000-14500.0000	H,V	81K0G7W	Tx	42.50	29.50	ESV-6006		SCPC AND TDM/TDMA USING QPSK AND BPSK MODULATION
72)	14000.0000-14500.0000	H,V	97K0G7W	Tx	43.40	29.50	ESV-6006		SCPC AND TDM/TDMA USING QPSK AND BPSK MODULATION
73)	11450.0000-12200.0000	H,V	44K8G1W	Rx			ESV-6006		SCPC USING QPSK AND BPSK MODULATION
74)	11450.0000-12200.0000	H,V	717KG1W	Rx			ESV-6006		SCPC USING QPSK AND BPSK MODULATION
75)	11450.0000-12200.0000	H,V	89K6G1W	Rx			ESV-6006		SCPC USING QPSK AND BPSK MODULATION
76)	11450.0000-12200.0000	H,V	1M43G1W	Rx			ESV-6006		SCPC USING QPSK ANAD BPSK MODULATION
77)	11450.0000-12200.0000	H,V	2M35G1W	Rx			ESV-6006		SCPC USING QPSK ANAD BPSK MODULATION
78)	11450.0000-12200.0000	H,V	36M0G7W	Rx			ESV-6006		SCPC AND TDM/TDMA USING QPSK AND BPSK MODULATION
79)	11450.0000-12200.0000	H,V	81K0G7W	Rx			ESV-6006		SCPC AND TDM/TDMA USING QPSK AND BPSK MODULATION
80)	10950.0000-11200.0000	H,V	1M43G1W	Rx			ESV-6006	257	SCPC USING QPSK AND BPSK MODULATION
81)	10950.0000-11200.0000	H,V	2M35G1W	Rx			ESV-6006	257	SCPC USING QPSK AND BPSK MODULATION

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82)	10950.0000-11200.0000	H,V	44K8G1W	Rx			ESV-6006	257	SCPC USING QPSK AND BPSK MODULATION
83)	10950.0000-11200.0000	H,V	717KG1W	Rx			ESV-6006	257	SCPC USING QPSK AND BPSK MODULATION
84)	10950.0000-11200.0000	H,V	89K6G1W	Rx			ESV-6006	257	SCPC USING QPSK AND BPSK MODULATION
85)	10950.0000-11200.0000	H,V	36M0G7W	Rx			ESV-6006	257	SCPC AND TDM/TDMA USING QPSK AND BPSK MODULATION
86)	10950.0000-11200.0000	H,V	81K0G7W	Rx			ESV-6006	257	SCPC AND TDM/TDMA USING QPSK AND BPSK MODULATION
87)	14000.0000-14500.0000	H,V	194KG7W	Tx	42.40	25.50	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
88)	14000.0000-14500.0000	H,V	1M16G7W	Tx	49.80	25.20	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
89)	14000.0000-14500.0000	H,V	1M36G7W	Tx	49.80	24.50	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
90)	14000.0000-14500.0000	H,V	1M55G7W	Tx	49.80	23.90	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
91)	14000.0000-14500.0000	H,V	291KG7W	Tx	44.10	25.50	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
92)	14000.0000-14500.0000	H,V	388KG7W	Tx	45.40	25.50	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
93)	14000.0000-14500.0000	H,V	44K8G1W	Tx	36.00	25.50	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
94)	14000.0000-14500.0000	H,V	485KG7W	Tx	46.30	25.50	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
95)	14000.0000-14500.0000	H,V	582KG7W	Tx	47.10	25.50	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
96)	14000.0000-14500.0000	H,V	64K0G7W	Tx	37.50	25.50	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
97)	14000.0000-14500.0000	H,V	679KG7W	Tx	47.80	25.50	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
98)	14000.0000-14500.0000	H,V	717KG1W	Tx	48.00	25.50	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
99)	14000.0000-14500.0000	H,V	776KG7W	Tx	48.40	25.50	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION

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100)	14000.0000-14500.0000	H,V	89K6G1W	Tx	39.00	25.50	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
101)	14000.0000-14500.0000	H,V	970KG7W	Tx	49.30	25.50	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
102)	14000.0000-14500.0000	H,V	97K0G7W	Tx	39.30	25.50	ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
103)	11450.0000-12200.0000	H,V	151KG7W	Rx			ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
104)	11450.0000-12200.0000	H,V	2M60G7W	Rx			ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
105)	11450.0000-12200.0000	H,V	44K8G1W	Rx			ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
106)	11450.0000-12200.0000	H,V	54M0G7W	Rx			ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
107)	11450.0000-12200.0000	H,V	717KG1W	Rx			ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
108)	11450.0000-12200.0000	H,V	89K6G1W	Rx			ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
109)	10950.0000-11200.0000	H,V	151KG7W	Rx			ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
110)	10950.0000-11200.0000	H,V	2M60G7W	Rx			ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
111)	10950.0000-11200.0000	H,V	44K8G1W	Rx			ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
112)	10950.0000-11200.0000	H,V	54M0G7W	Rx			ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
113)	10950.0000-11200.0000	H,V	717KG1W	Rx			ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
114)	10950.0000-11200.0000	H,V	89K6G1W	Rx			ESV-V110		DIGITAL TRAFFIC USING QPSK AND BPSK MODULATION
115)	14000.0000-14500.0000	H,V	50K0F3X	Tx	57.30	46.30	Hub	1900	DIGITAL SERVICES
116)	14000.0000-14500.0000	H,V	50K0G3D	Tx	51.30	40.30	Hub	1900	DIGITAL SERVICES
117)	11700.0000-12200.0000	H,V	50K0F3X	Rx			Hub	1010	DIGITAL SERVICES
118)	11700.0000-12200.0000	H,V	50K0G3D	Rx			Hub	1010	DIGITAL SERVICES

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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
119)	5925.0000-6425.0000	L,R	108KG7W	Tx	54.50	40.20	SAPA19		DIGITAL DATA
120)	5925.0000-6425.0000	L,R	203KG7W	Tx	49.40	32.30	SAPA19		DIGITAL DATA
121)	3700.0000-4200.0000	L,R	108KG7W	Rx			SAPA19		DIGITAL DATA
122)	3700.0000-4200.0000	L,R	203KG7W	Rx			SAPA19		DIGITAL DATA

C) Frequency Coordination Limits

#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.) East Limit	Satellite Arc (Deg. Long.) West Limit	Elevation (Degrees) East Limit	Elevation (Degrees) West Limit	Azimuth (Degrees) East Limit	Azimuth (Degrees) West Limit	Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
1)	11450.0000-12200.0000	60.0W	143.0W	20.0	42.0	164.0	260.0		ESV-6006
2)	10950.0000-11200.0000	60.0W	143.0W	20.0	42.0	164.0	260.0		ESV-6006
3)	3700.0000-4200.0000	176.0W	192.0W	18.5	05.4	249.8	260.2		SAPA19
4)	5925.0000-6425.0000	176.0W	192.0W	18.5	05.4	249.8	260.2	-4.6	SAPA19
5)	14000.0000-14500.0000	60.0W	143.0W	16.8	42.6	108.7	218.1	11.5	Hub
6)	11700.0000-12200.0000	60.0W	143.0W	16.8	42.6	108.7	218.1		Hub
7)	14000.0000-14500.0000	60.0W	143.0W	20.0	42.0	164.0	260.0		ESV-4003A
8)	11450.0000-12200.0000	60.0W	143.0W	20.0	42.0	164.0	260.0		ESV-4003A
9)	10950.0000-11200.0000	60.0W	143.0W	20.0	42.0	164.0	260.0		ESV-4003A
10)	14000.0000-14500.0000	60.0W	143.0W	20.0	42.0	164.0	260.0		ESV-4006
11)	11450.0000-12200.0000	60.0W	143.0W	20.0	42.0	164.0	260.0		ESV-4006
12)	10950.0000-11200.0000	60.0W	143.0W	20.0	42.0	164.0	260.0		ESV-4006
13)	14000.0000-14500.0000	60.0W	143.0W	20.0	42.0	164.0	260.0		ESV-4996T
14)	11450.0000-12200.0000	60.0W	143.0W	20.0	42.0	164.0	260.0		ESV-4996T
15)	10950.0000-11200.0000	60.0W	143.0W	20.0	42.0	164.0	260.0		ESV-4996T
16)	14000.0000-14500.0000	60.0W	143.0W	20.0	42.0	164.0	260.0		ESV-V110
17)	11450.0000-12200.0000	60.0W	143.0W	20.0	42.0	164.0	260.0		ESV-V110
18)	10950.0000-11200.0000	60.0W	143.0W	20.0	42.0	164.0	260.0		ESV-V110

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D) Points of Communications

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

1) REMOTE-4 ESV to SATMEX-5 @ 116.8 W.L. (Mexico-licensed)
2) REMOTE-4 ESV to Permitted Space Station List
3) SAPA19 (6.3M) to Permitted Space Station List
4) SAPA19 (6.3M) to NSS- 9 (S2756) @ 177 W.L. (Netherlands-licensed)
5) SAPA19 (6.3M) to INTELSAT 18 (S2817) @ 180 degrees E.L. (U.S.-licensed)
6) Hub (4.5m) to SATMEX-5 @ 116.8 W.L. (Mexico-licensed)
7) Hub (4.5m) to Permitted Space Station List
8) REMOTE-1 ESV to SATMEX-5 @ 116.8 W.L. (Mexico-licensed)
9) REMOTE-1 ESV to Permitted Space Station List
10) REMOTE-2 ESV to SATMEX-5 @ 116.8 W.L. (Mexico-licensed)
11) REMOTE-2 ESV to Permitted Space Station List
12) REMOTE-3 ESV to SATMEX-5 @ 116.8 W.L. (Mexico-licensed)
13) REMOTE-3 ESV to Permitted Space Station List
14) REMOTE-5 ESV to Permitted Space Station List

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)
REMOTE-1 ESV	ESV-4003A	250	1	SEATEL	4003A			
Max Gains(s):	40.1 dBi @	11.9500 GHz	41.8 dBi @	14.2500 GHz				
Maximum total input power at antenna flange (Watts) =	2.50							
Maximum aggregate output EIRP for all carriers (dBW) =	45.80							
REMOTE-2 ESV	ESV-4006	250	1	SEATEL	4006			
Max Gains(s):	40.1 dBi @	11.9500 GHz	41.8 dBi @	14.2500 GHz				
Maximum total input power at antenna flange (Watts) =	3.60							
Maximum aggregate output EIRP for all carriers (dBW) =	47.40							
REMOTE-3 ESV	ESV-4996T	50	1.2	SEATEL	4996T			
Max Gains(s):	41.6 dBi @	11.9500 GHz	42.5 dBi @	14.2500 GHz				
Maximum total input power at antenna flange (Watts) =	7.10							
Maximum aggregate output EIRP for all carriers (dBW) =	51.10							

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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)
REMOTE-4 ESV	ESV-6006	350	1.5	SEATEL	6006			
Max Gains(s):	42.5 dBi @ 12.0000 GHz	43.5 dBi @ 14.2000 GHz						
Maximum total input power at antenna flange (Watts) =	7.13							
Maximum aggregate output EIRP for all carriers (dBW) =	52.00							
REMOTE-5 ESV	ESV-V110	500	1.05	INTELLIAN	V110			
Max Gains(s):	39.6 dBi @ 12.2000 GHz	41.7 dBi @ 14.2500 GHz						
Maximum total input power at antenna flange (Watts) =	6.97							
Maximum aggregate output EIRP for all carriers (dBW) =	49.83							
Hub (4.5m)	Hub	1	4.5	ANDREW	ESA-45	228.6	4.9 AGL/ 233.5 AMSL	
Max Gains(s):	53.1 dBi @ 12.0000 GHz	54.3 dBi @ 14.0000 GHz						
Maximum total input power at antenna flange (Watts) =	32.00							
Maximum aggregate output EIRP for all carriers (dBW) =	63.00							
SAPA19 (6.3M	SAPA19	1	6.3	VERTEX	RSI	228.6	7 AGL/ 235.6 AMSL	
Max Gains(s):	46.5 dBi @ 3.9500 GHz	50.7 dBi @ 6.1750 GHz						
Maximum total input power at antenna flange (Watts) =	250.00							
Maximum aggregate output EIRP for all carriers (dBW) =	74.70							

F) Remote Control Point:

REMOTE-1 ESV
7676 PINE GROVE ROAD
SANTA PAULA, VENTURA, CA 93060
805-933-4000
Call Sign:

REMOTE-2 ESV
7676 PINE GROVE ROAD
SANTA PAULA, VENTURA, CA 93060
805-933-4000
Call Sign:

UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION

RADIO STATION AUTHORIZATION

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F) Remote Control Point:

REMOTE-3 ESV	7676 PINE GROVE ROAD SANTA PAULA, VENTURA, CA 93060 805-933-4000	**Call Sign:**
REMOTE-4 ESV	7676 PINE GROVE ROAD SANTA PAULA, VENTURA, CA 93060 805-933-4000	**Call Sign:**
REMOTE-5 ESV	7676 PINE GROVE ROAD SANTA PAULA, VENTURA, CA 93060 805-933-4030	**Call Sign:** E930320

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:

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.

167 --- This authorization is limited to the total number of terminals listed in Section A of this license for this Site ID.

249 --- This license is granted authority to provide services for both Earth Stations on-board Vessels (ESV) and VSAT Network.

257 --- Licensee is authorized to use the conventional Ku-band frequencies only 14.0-14.5 GHz and 11.7-12.2 GHz to communicate with ALSAT as a point of communication.

1010 --- Applicable to all receiving frequency bands. Emission designator indicates the maximum bandwidth of received signal at associated station(s). Maximum EIRP and maximum EIRP density are not applicable to receive operations.

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H) Special and General Provisions

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

1900 --- Applicable to all transmitting frequency bands. Authority is granted to transmit any number of RF carriers with the specified parameters on any discrete frequencies within associated band in accordance with the other terms and conditions of this authorization, subject to any additional limitations that may be required to avoid unacceptable levels of inter-satellite interference.

2010 --- This authorization is issued pursuant to the Commission's Second Report and Order adopted June 16, 1972 (35 FCC 2d 844) and Memorandum, Opinion and Order adopted December 21, 1972 (38 FCC 2d 665) in Docket No. 16495 and is subject to the policies adopted in that proceeding.

2087 --- The use of these small diameter facilities is authorized pursuant to the Commission's Declaratory Order in Routine Licensing of earth stations in the 6 GHz and 14 GHz bands using antennas less than 9 meters and 5 meters in diameter, respectively, for both full transponder and narrowband transmissions (DA 87-391) released April 13, 1987.

2916 --- Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the earth station's power flux density levels exceed the specified guidelines.

2938 --- Upon completion of construction, each licensee must file with the Commission a certification including the following information: (1) name of the licensee, (2) file number of the application, (3) call sign of the antenna, (4) date of the license, (5) certification that the facility as authorized has been completed, (6) certification that each antenna facility has been tested and is within 2 dB of the pattern specified in Section 25.209, and (7) certification that the station is operational (including the date of commencement of service) and will remain operational during the license period unless the license is submitted for cancellation.

3219 --- All existing transmitting facilities, operations and devices regulated by the Commission must be in compliance with the Commission's radiofrequency (RF) exposure guidelines, pursuant to Section 1.1307(b)(1) through (b)(3) of the Commission's rules, or if not in compliance, file an Environmental Assessment (EA) as specified in Section 1.1311. See 47 CFR § 1.1307 (b) (5).

5208 --- The licensee shall take all necessary measures to ensure that the antenna 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 wherever such exposures might occur. 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) 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.

5215 --- All operations shall be on a common carrier basis.

9659 --- The licensee is afforded 30 days from the date of issuance of this license to decline it as conditioned. Failure to respond within this period will constitute formal acceptance of the authorization as conditioned.

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H) Special and General Provisions

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

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.

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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.

Licensees 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.

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