



UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
RADIO STATION AUTHORIZATION

Name: ISAT US Inc.

Call Sign: E150097

Authorization Type: Modification of License

File Number: SES-MFS-20160527-00458

Non Common Carrier

Grant date: 07/18/2016

Expiration Date: 10/22/2030



Nature of Service: Fixed Satellite Service

Class of Station: Fixed Earth Stations

A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	Special Provisions NAD (Refer to Section H)
1)	1	4000 Blanket Terminals CONUS, PR, USVI,			0	NA
2)	2	4000 Blanket Terminals CONUS, PR, USVI,			0	NA
3)	3	4000 Blanket Terminals CONUS, PR, USVI,			0	NA
4)	4	4000 Blanket Terminals CONUS, PR, USVI,			0	NA
5)	5	4000 Blanket Terminals CONUS, PR, USVI,			0	NA
6)	6	4000 Blanket Terminals CONUS, PR, USVI,			0	NA



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A) Site Location(s)

#	Site ID	Address	Latitude	Longitude	Elevation (Meters)	NAD	Special Provisions (Refer to Section H)
7)	7	4000 Blanket Terminals CONUS, PR, USVI,			0	NA	
8)	8	4000 Blanket Terminals CONUS, PR, USVI,			0	NA	
9)	9	4000 Blanket Terminals CONUS, PR, USVI,				NA	

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 October 22, 2015 (3 AM Eastern Standard Time) and ending October 22, 2030 (3 AM Eastern Standard Time) . The required date of completion of construction and commencement of operation is July 18, 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)	29500.0000-30000.0000	R	3M32G7W	Tx	51.20	22.00	Fixed 1		Various modulation up to 32 APSK Digital Data Link/Data Signalling
2)	29500.0000-30000.0000	R	460KG7W	Tx	42.60	22.00	Fixed 1		Various modulation up to 32 APSK Digital Data Link/Data Signalling



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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
3)	29500.0000-30000.0000	R	5M00G1W	Tx	51.20	20.20	Fixed 1		Various modulation up to 32 APSK Digital Data Link/Data Signalling
4)	19700.0000-20200.0000	L	32M0G7W	Rx	0.00	0.00	Fixed 1		Various modulation up to 32 APSK Digital Data Link
5)	29500.0000-30000.0000	R	3M99G7W	Tx	53.80	23.80	Fixed 3		Various modulation up to 32 APSK Digital Data Link/Data Signalling
6)	29500.0000-30000.0000	R	460KG7W	Tx	44.40	23.80	Fixed 3		Various modulation up to 32 APSK Digital Data Link/Data Signalling
7)	29500.0000-30000.0000	R	5M00G1W	Tx	53.80	22.80	Fixed 3		Various modulation up to 32 APSK Digital Data Link/Data Signalling
8)	19700.0000-20200.0000	L	32M0G7W	Rx	0.00	0.00	Fixed 3		Various modulation up to 32 APSK Digital Data Link
9)	29500.0000-30000.0000	R	460KG7W	Tx	46.80	26.20	Fixed 4		Various modulation up to 32 APSK Digital Data Link/Data Signalling
10)	29500.0000-30000.0000	R	4M18G7W	Tx	56.40	26.20	Fixed 4		Various modulation up to 32 APSK Digital Data Link/Data Signalling
11)	29500.0000-30000.0000	R	5M00G1W	Tx	56.40	25.40	Fixed 4		Various modulation up to 32 APSK Digital Data Link/Data Signalling
12)	19700.0000-20200.0000	L	32M0G7W	Rx	0.00	0.00	Fixed 4		Various modulation up to 32 APSK Digital Data Link
13)	29500.0000-30000.0000	R	3M24G7W	Tx	51.80	22.70	Fixed 5		Various modulation up to 32 APSK Digital Data Link/Data Signalling
14)	29500.0000-30000.0000	R	460KG7W	Tx	43.30	22.70	Fixed 5		Various modulation up to 32 APSK Digital Data Link/Data Signalling
15)	29500.0000-30000.0000	R	5M00G1W	Tx	51.80	20.80	Fixed 5		Various modulation up to 32 APSK Digital Data Link/Data Signalling
16)	19700.0000-20200.0000	L	32M0G7W	Rx	0.00	0.00	Fixed 5		Various modulation up to 32 APSK Digital Data Link



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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
17)	29500.0000-30000.0000	R	2M40G7W	Tx	49.80	22.00	Fixed 6		Various modulation up to 32 APSK Digital Data Link/Data Signalling
18)	29500.0000-30000.0000	R	460KG7W	Tx	42.60	22.00	Fixed 6		Various modulation up to 32 APSK Digital Data Link/Data Signalling
19)	29500.0000-30000.0000	R	5M00G1W	Tx	49.80	18.80	Fixed 6		Various modulation up to 32 APSK Digital Data Link/Data Signalling
20)	19700.0000-20200.0000	L	32M0G7W	Rx	0.00	0.00	Fixed 6		Various modulation up to 32 APSK Digital Data Link
21)	29500.0000-30000.0000	R	3M03G7W	Tx	53.50	24.70	Fixed 7A		Various modulation up to 32 APSK Digital Data Link/Data Signalling
22)	29500.0000-30000.0000	R	460KG7W	Tx	45.30	24.70	Fixed 7A		Various modulation up to 32 APSK Digital Data Link/Data Signalling
23)	29500.0000-30000.0000	R	5M00G1W	Tx	53.50	22.50	Fixed 7A		Various modulation up to 32 APSK Digital Data Link/Data Signalling
24)	19700.0000-20200.0000	L	32M0G7W	Rx	0.00	0.00	Fixed 7A		Various modulation up to 32 APSK Digital Data Link
25)	29500.0000-30000.0000	R	3M03G7W	Tx	53.50	24.70	Fixed 7B		Various modulation up to 32 APSK Digital Data Link/Data Signalling
26)	29500.0000-30000.0000	R	460KG7W	Tx	45.30	24.70	Fixed 7B		Various modulation up to 32 APSK Digital Data Link/Data Signalling
27)	29500.0000-30000.0000	R	5M00G1W	Tx	53.50	22.50	Fixed 7B		Various modulation up to 32 APSK Digital Data Link/Data Signalling
28)	19700.0000-20200.0000	L	32M0G7W	Rx	0.00	0.00	Fixed 7B		Various modulation up to 32 APSK Digital Data Link
29)	29500.0000-30000.0000	R	2M51G7W	Tx	59.40	31.40	Fixed 8A		Various modulation up to 32 APSK Digital Data Link/Data Signalling
30)	29500.0000-30000.0000	R	460KG7W	Tx	52.00	31.40	Fixed 8A		Various modulation up to 32 APSK Digital Data Link/Data Signalling



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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
31)	29500.0000-30000.0000	R	5M00G1W	Tx	59.40	28.40	Fixed 8A		Various modulation up to 32 APSK Digital Data Link/Data Signalling
32)	19700.0000-20200.0000	L	32M0G7W	Rx	0.00	0.00	Fixed 8A		Various modulation up to 32 APSK Digital Data Link
33)	29500.0000-30000.0000	R	2M51G7W	Tx	59.40	31.40	Fixed 8B		Various modulation up to 32 APSK Digital Data Link/Data Signalling
34)	29500.0000-30000.0000	R	460KG7W	Tx	52.00	31.40	Fixed 8B		Various modulation up to 32 APSK Digital Data Link/Data Signalling
35)	29500.0000-30000.0000	R	5M00G1W	Tx	59.40	28.40	Fixed 8B		Various modulation up to 32 APSK Digital Data Link/Data Signalling
36)	19700.0000-20200.0000	L	32M0G7W	Rx	0.00	0.00	Fixed 8B		Various modulation up to 32 APSK Digital Data Link
37)	29500.0000-30000.0000	R	460KG7W	Tx	45.30	24.70	Fixed 9		Various modulation up to 32 APSK Digital Data Link/Data Signalling
38)	29500.0000-30000.0000	R	4M18G7W	Tx	54.50	24.30	Fixed 9		Various modulation up to 32 APSK Digital Data Link/Data Signalling
39)	29500.0000-30000.0000	R	5M00G1W	Tx	54.50	23.50	Fixed 9		Various modulation up to 32 APSK Digital Data Link/Data Signalling
40)	19700.0000-20200.0000	L	32M0G7W	Rx			Fixed 9		Various modulation up to 32 APSK Digital Data Link
41)	29500.0000-30000.0000	R	3M32G7W	Tx	51.20	22.00	TF 1		Various modulation up to 32 APSK Digital Data Link/Data Signalling
42)	29500.0000-30000.0000	R	460KG7W	Tx	42.60	22.00	TF 1		Various modulation up to 32 APSK Digital Data Link/Data Signalling
43)	29500.0000-30000.0000	R	5M00G1W	Tx	51.20	20.20	TF 1		Various modulation up to 32 APSK Digital Data Link/Data Signalling
44)	19700.0000-20200.0000	L	32M0G7W	Rx	0.00	0.00	TF 1		Various modulation up to 32 APSK Digital Data Link



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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
45)	29500.0000-30000.0000	R	460KG7W	Tx	45.30	24.70	TF 2		Various modulation up to 32 APSK Digital Data Link/Data Signalling
46)	29500.0000-30000.0000	R	4M18G7W	Tx	54.90	24.70	TF 2		Various modulation up to 32 APSK Digital Data Link/Data Signalling
47)	29500.0000-30000.0000	R	5M00G1W	Tx	54.90	23.90	TF 2		Various modulation up to 32 APSK Digital Data Link/Data Signalling
48)	19700.0000-20200.0000	L	32M0G7W	Rx	0.00	0.00	TF 2		Various modulation up to 32 APSK Digital Data Link
49)	29500.0000-30000.0000	R	2M40G7W	Tx	49.80	22.00	TF 6		Various modulation up to 32 APSK Digital Data Link/Data Signalling
50)	29500.0000-30000.0000	R	460KG7W	Tx	42.60	22.00	TF 6		Various modulation up to 32 APSK Digital Data Link/Data Signalling
51)	29500.0000-30000.0000	R	5M00G1W	Tx	49.80	18.80	TF 6		Various modulation up to 32 APSK Digital Data Link/Data Signalling
52)	19700.0000-20200.0000	L	32M0G7W	Rx	0.00	0.00	TF 6		Various modulation up to 32 APSK Digital Data Link
53)	29500.0000-30000.0000	R	3M03G7W	Tx	53.50	24.70	TF 7		Various modulation up to 32 APSK Digital Data Link/Data Signalling
54)	29500.0000-30000.0000	R	460KG7W	Tx	45.30	24.70	TF 7		Various modulation up to 32 APSK Digital Data Link/Data Signalling
55)	29500.0000-30000.0000	R	5M00G1W	Tx	53.50	22.50	TF 7		Various modulation up to 32 APSK Digital Data Link/Data Signalling
56)	19700.0000-20200.0000	L	32M0G7W	Rx	0.00	0.00	TF 7		Various modulation up to 32 APSK Digital Data Link
57)	29500.0000-30000.0000	R	460KG7W	Tx	45.30	24.70	TF 9		Various modulation up to 32 APSK Digital Data Link/Data Signalling
58)	29500.0000-30000.0000	R	4M18G7W	Tx	54.50	24.30	TF 9		Various modulation up to 32 APSK Digital Data Link/Data Signalling



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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
59)	29500.0000-30000.0000	R	5M00G1W	Tx	54.50	23.50	TF 9		Various modulation up to 32 APSK Digital Data Link/Data Signalling
60)	19700.0000-20200.0000	L	32M0G7W	Rx			TF 9		Various modulation up to 32 APSK Digital Data Link

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)	29500.0000-30000.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		-14.2	Fixed 1
2)	19700.0000-20200.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		0	Fixed 1
3)	29500.0000-30000.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		-14.2	TF 1
4)	19700.0000-20200.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		0	TF 1
5)	29500.0000-30000.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		-15.2	TF 2
6)	19700.0000-20200.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		0	TF 2
7)	29500.0000-30000.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		-15	Fixed 3
8)	19700.0000-20200.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		0	Fixed 3
9)	29500.0000-30000.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		-14.1	Fixed 5
10)	19700.0000-20200.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		0	Fixed 5
11)	29500.0000-30000.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		-12.8	Fixed 6
12)	19700.0000-20200.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		0	Fixed 6
13)	29500.0000-30000.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		-12.8	TF 6
14)	19700.0000-20200.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		0	TF 6
15)	29500.0000-30000.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		-13.8	Fixed 7A
16)	19700.0000-20200.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		0	Fixed 7A
17)	29500.0000-30000.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		-13.8	TF 7
18)	19700.0000-20200.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		0	TF 7
19)	29500.0000-30000.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		-13.8	Fixed 7B
20)	19700.0000-20200.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		0	Fixed 7B
21)	19700.0000-20200.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		0	Fixed 8A
22)	29500.0000-30000.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		-44.4	Fixed 8A



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#	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		
23)	29500.0000-30000.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		-44.4	Fixed 8B
24)	19700.0000-20200.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		0	Fixed 8B
25)	29500.0000-30000.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		-15.6	Fixed 9
26)	19700.0000-20200.0000	0.0E-360.0W		05.0-05.0		000.0-000.0			Fixed 9
27)	29500.0000-30000.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		-15.6	TF 9
28)	19700.0000-20200.0000	0.0E-360.0W		05.0-05.0		000.0-000.0			TF 9
29)	29500.0000-30000.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		-15.2	Fixed 4
30)	19700.0000-20200.0000	0.0E-360.0W		05.0-05.0		000.0-000.0		0	Fixed 4

D) Points of Communications

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

- 1) 1 to INMARSAT 5F2 satellite @ 55 W.L. (U. K. licensed)
- 2) 1 to INMARSAT 5F3 satellite @ 179.6 E.L. (U. K. licensed)
- 3) 2 to INMARSAT 5F2 satellite @ 55 W.L. (U. K. licensed)
- 4) 2 to INMARSAT 5F3 satellite @ 179.6 E.L. (U. K. licensed)
- 5) 3 to INMARSAT 5F2 satellite @ 55 W.L. (U. K. licensed)
- 6) 3 to INMARSAT 5F3 satellite @ 179.6 E.L. (U. K. licensed)
- 7) 5 to INMARSAT 5F2 satellite @ 55 W.L. (U. K. licensed)
- 8) 5 to INMARSAT 5F3 satellite @ 179.6 E.L. (U. K. licensed)
- 9) 6 to INMARSAT 5F2 satellite @ 55 W.L. (U. K. licensed)
- 10) 6 to INMARSAT 5F3 satellite @ 179.6 E.L. (U. K. licensed)
- 11) 7 to INMARSAT 5F2 satellite @ 55 W.L. (U. K. licensed)
- 12) 7 to INMARSAT 5F3 satellite @ 179.6 E.L. (U. K. licensed)
- 13) 8 to INMARSAT 5F2 satellite @ 55 W.L. (U. K. licensed)
- 14) 8 to INMARSAT 5F3 satellite @ 179.6 E.L. (U. K. licensed)
- 15) 9 to INMARSAT 5F3 satellite @ 179.6 E.L. (U. K. licensed)
- 16) 9 to INMARSAT 5F2 satellite @ 55 W.L. (U. K. licensed)
- 17) 4 to INMARSAT 5F2 satellite @ 55 W.L. (U. K. licensed)
- 18) 4 to INMARSAT 5F3 satellite @ 179.6 E.L. (U. K. licensed)



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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)
1	Fixed 1	4000	0.75	Cobham SATCOM	3075	0	0 AGL/ 0 AMSL	
	Max Gains(s):	41.3 dBi @ 19.7000 GHz	41.6 dBi @ 19.9500 GHz	41.6 dBi @ 20.2000 GHz	44.3 dBi @ 29.5000 GHz	44.2 dBi @ 29.7500 GHz	44.4	
		Maximum total input power at antenna flange (Watts) =	5.00					
		Maximum aggregate output EIRP for all carriers (dBW) =	51.20					
3	Fixed 3	4000	0.85	L3	Cheetah II	0	0 AGL/ 0 AMSL	
	Max Gains(s):	42.5 dBi @ 19.7000 GHz	42.9 dBi @ 20.2000 GHz	46.8 dBi @ 29.5000 GHz	46.6 dBi @ 30.0000 GHz	42.9 dBi @ 19.9500 GHz	46.9	
		Maximum total input power at antenna flange (Watts) =	5.00					
		Maximum aggregate output EIRP for all carriers (dBW) =	53.80					
4	Fixed 4	4000	1.2	L3	Hawkeye III Lite	0	0 AGL/ 0 AMSL	
	Max Gains(s):	45.7 dBi @ 19.7000 GHz	45.9 dBi @ 19.9500 GHz	46.0 dBi @ 20.2000 GHz	49.2 dBi @ 29.5000 GHz	49.4 dBi @ 29.7500 GHz	49.4	
		Maximum total input power at antenna flange (Watts) =	5.00					
		Maximum aggregate output EIRP for all carriers (dBW) =	56.40					
5	Fixed 5	4000	0.69	Paradigm/SWT	Connect 70	0	0 AGL/ 0 AMSL	
	Max Gains(s):	44.7 dBi @ 29.5000 GHz	44.8 dBi @ 29.7500 GHz	44.9 dBi @ 30.0000 GHz	41.1 dBi @ 19.7000 GHz	41.2 dBi @ 19.9500 GHz	41.2	
		Maximum total input power at antenna flange (Watts) =	5.00					
		Maximum aggregate output EIRP for all carriers (dBW) =	51.80					
6	Fixed 6	4000	0.65	SWT	Atom 65GX/01	0	0 AGL/ 0 AMSL	
	Max Gains(s):	40.6 dBi @ 19.7000 GHz	40.6 dBi @ 19.9500 GHz	41.0 dBi @ 20.2000 GHz	43.4 dBi @ 29.5000 GHz	42.8 dBi @ 29.7500 GHz	44.4	
		Maximum total input power at antenna flange (Watts) =	5.00					
		Maximum aggregate output EIRP for all carriers (dBW) =	49.80					
7	Fixed 7A	4000	0.934	Paradigm/SWT	Connect 100	0	0 AGL/ 0 AMSL	
	Max Gains(s):	43.8 dBi @ 19.7000 GHz	43.9 dBi @ 19.9500 GHz	44.1 dBi @ 20.2000 GHz	46.6 dBi @ 29.5000 GHz	46.5 dBi @ 29.7500 GHz	46.7	
		Maximum total input power at antenna flange (Watts) =	5.00					
		Maximum aggregate output EIRP for all carriers (dBW) =	53.50					



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RADIO STATION AUTHORIZATION

Name: ISAT US Inc.

Call Sign: E150097

Authorization Type: Modification of License

File Number: SES-MFS-20160527-00458

Non Common Carrier

Grant date: 07/18/2016

Expiration Date: 10/22/2030

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)
7	Fixed 7B	4000	0.934	Paradigm/SWT	SKY98GX/01	0	0 AGL/ 0 AMSL	
Max Gains(s): 43.8 dBi @ 19.7000 GHz 43.9 dBi @ 19.9500 GHz 44.1 dBi @								
20.2000 GHz 46.6 dBi @ 29.5000 GHz 46.5 dBi @ 29.7500 GHz 46.7								
dBi @ 30.0000 GHz								
Maximum total input power at antenna flange (Watts) =					5.00			
Maximum aggregate output EIRP for all carriers (dBW) =					53.50			
8	Fixed 8A	4000	1.8	Paradigm/SWT	Connect 180	0	0 AGL/ 0 AMSL	
Max Gains(s): 49.0 dBi @ 19.7000 GHz 49.1 dBi @ 19.9500 GHz 49.2 dBi @								
20.2000 GHz 52.5 dBi @ 29.5000 GHz 52.4 dBi @ 29.7500 GHz 52.4								
dBi @ 30.0000 GHz								
Maximum total input power at antenna flange (Watts) =					5.00			
Maximum aggregate output EIRP for all carriers (dBW) =					59.40			
8	Fixed 8B	4000	1.8	Paradigm/SWT	SKY180GX/01	0	0 AGL/ 0 AMSL	
Max Gains(s): 49.0 dBi @ 19.7000 GHz 49.1 dBi @ 19.9500 GHz 49.2 dBi @								
20.2000 GHz 52.5 dBi @ 29.5000 GHz 52.4 dBi @ 29.7500 GHz 52.4								
dBi @ 30.0000 GHz								
Maximum total input power at antenna flange (Watts) =					5.00			
Maximum aggregate output EIRP for all carriers (dBW) =					59.40			
9	Fixed 9	4000	0.89	SKYWARE TECHNOLOGIES	ATOM 99			
Max Gains(s): 47.5 dBi @ 30.0000 GHz 43.9 dBi @ 19.7000 GHz 44.2 dBi @								
20.2000 GHz 47.5 dBi @ 29.5000 GHz 44.0 dBi @ 19.9500 GHz 47.5								
dBi @ 29.7500 GHz								
Maximum total input power at antenna flange (Watts) =					5.00			
Maximum aggregate output EIRP for all carriers (dBW) =					54.50			
1	TF 1	4000	0.75	Cobham SATCOM	5075	0	0 AGL/ 0 AMSL	
Max Gains(s): 41.6 dBi @ 19.9500 GHz 41.6 dBi @ 20.2000 GHz 44.3 dBi @								
29.5000 GHz 44.2 dBi @ 29.7500 GHz 44.4 dBi @ 30.0000 GHz 41.3								
dBi @ 19.7000 GHz								
Maximum total input power at antenna flange (Watts) =					5.00			
Maximum aggregate output EIRP for all carriers (dBW) =					51.20			
2	TF 2	4000	1	Cobham SATCOM	7100	0	0 AGL/ 0 AMSL	
Max Gains(s): 44.6 dBi @ 19.7000 GHz 44.6 dBi @ 19.9500 GHz 44.7 dBi @								
20.2000 GHz 47.8 dBi @ 29.5000 GHz 47.9 dBi @ 29.7500 GHz 47.0								
dBi @ 30.0000 GHz								
Maximum total input power at antenna flange (Watts) =					5.00			
Maximum aggregate output EIRP for all carriers (dBW) =					54.90			



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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)
6	TF 6	4000	0.65	SWT	Atom 65AAGX/01 0		0 AGL/ 0 AMSL	
Max Gains(s): 40.6 dBi @ 19.7000 GHz 40.6 dBi @ 19.9500 GHz 41.0 dBi @ 20.2000 GHz 43.4 dBi @ 29.5000 GHz 42.8 dBi @ 29.7500 GHz 44.4 dBi @ 30.0000 GHz								
Maximum total input power at antenna flange (Watts) =					5.00			
Maximum aggregate output EIRP for all carriers (dBW) =					49.80			
7	TF 7	4000	0.934	Paradigm/SWT	Connect 100T 0		0 AGL/ 0 AMSL	
Max Gains(s): 46.7 dBi @ 30.0000 GHz 43.8 dBi @ 19.7000 GHz 43.9 dBi @ 19.9500 GHz 44.1 dBi @ 20.2000 GHz 46.6 dBi @ 29.5000 GHz 46.5 dBi @ 29.7500 GHz								
Maximum total input power at antenna flange (Watts) =					5.00			
Maximum aggregate output EIRP for all carriers (dBW) =					53.50			
9	TF 9	4000	0.89	SYKYWARE TECHNOLOGIES	ATOM 99			
Max Gains(s): 47.5 dBi @ 30.0000 GHz 43.9 dBi @ 19.7000 GHz 44.2 dBi @ 20.2000 GHz 47.5 dBi @ 29.5000 GHz 44.0 dBi @ 19.9500 GHz 47.5 dBi @ 29.7500 GHz								
Maximum total input power at antenna flange (Watts) =					5.00			
Maximum aggregate output EIRP for all carriers (dBW) =					54.50			

F) Remote Control Point:

1	6211 Glen Circle Lino Lakes, Anoka, MN 55014 808-469-7104	Call Sign: E120072
2	6211 Glen Circle Lino Lakes, Anoka, MN 55014 808-469-7104	Call Sign: E120072
3	6211 Glen Circle Lino Lakes, Anoka, MN 55014 808-469-7104	Call Sign: E120072



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F) Remote Control Point:

4	6211 Glen Circle Lino Lakes, Anoka, MN 55014 808-469-7104	Call Sign: E120072
5	6211 Glen Circle Lino Lakes, Anoka, MN 55014 808-469-7104	Call Sign: E120072
6	6211 Glen Circle Lino Lakes, Anoka, MN 55014 808-469-7104	Call Sign: E120072
7	6211 Glen Circle Lino Lakes, Anoka, MN 55014 808-469-7104	Call Sign: E120072
8	6211 Glen Circle Lino Lakes, Anoka, MN 55014 808-469-7104	Call Sign: E120072
9	6211 Glen Circle Lino Lakes, Anoka, MN 55014 808-469-7104	Call Sign: E120072

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:

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.
- 2653 --- Licensee shall maintain a 24-hour point of contact who can remedy any interference problems or terminate operations if necessary.
- 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.
- 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.
- 5216 --- All operations shall be on a non-common carrier basis.
- 90104 --- For any new antenna authorized by this grant, the licensee must file with the Commission a certification including the following information: name of the licensee, file number of the application, call sign of the antenna, Site ID, date of the license and certification that the antenna model was put into operation.
- 90244 --- This authorization and any licenses related thereto are subject to compliance with the provisions of the Agreement between Inmarsat on the one hand and the U.S. Department of Justice (DOJ) and the Department of Homeland Security (DHS) on the other, dated September 23, 2008, as amended.
- 90354 --- Operations shall be in accordance with the US334 Coordination Agreement between the operators of Inmarsat-5 F3 satellite and US Government satellites operating in the 17.7-20.2 GHz frequency band.



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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:

90355 --- Operations shall be in accordance with the US334 Coordination Agreement between the operators of Inmarsat-5 F2 satellite and US Government satellites operating in the 17.7-20.2 GHz frequency band.

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.