



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

Name: Intelsat License LLC

Call Sign: E950307

Authorization Type: Modification of License

File Number: SES-MFS-20151120-00856

Non Common Carrier

Grant date: 02/29/2016

Expiration Date: 09/15/2020



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	961 ANSELMO COURT NAPA, CA 94558	38°14'43.7"N	122°16'50.9"W	7.62	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 September 15, 2005 (3 AM Eastern Standard Time) and ending September 15, 2020 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is 00/00/0000. 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)	6176.3000-6176.3000	L,R	850KFXD	Tx	78.97	70.20	1	90296	TELEMETRY & RANGING
2)	6173.7000-6173.7000	L,R	850KFXD	Tx	78.97	55.70	1	90296	TELEMETRY & RANGING
3)	5925.0000-6425.0000	H,V,L,R	1M36G7W	Tx	68.00	42.70	1		DATA
4)	5925.0000-6425.0000	H,V,L,R	950KF3D	Tx	77.00	53.20	1		TT&C
5)	5925.0000-6425.0000	H,V,L,R	27M0F8F	Tx	82.80	52.80	1		ANALOG TV
6)	5925.0000-6425.0000	H,V,L,R	30M0F8F	Tx	83.20	53.20	1		ANALOG TV
7)	5925.0000-6425.0000	H,V,L,R	36M0F8F	Tx	84.00	54.00	1		ANALOG TV
8)	5925.0000-6425.0000	H,V,L,R	24M0G7F	Tx	80.50	42.70	1		DIGITAL TV
9)	5925.0000-6425.0000	H,V,L,R	2M70G7F	Tx	71.00	42.70	1		DIGITAL TV



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10)	5925.0000-6425.0000	H, V, L, R	54M0G7F	Tx	84.00	42.70	1		DIGITAL TV
11)	5925.0000-6425.0000	H, V, L, R	6M50G7F	Tx	74.80	42.70	1		DIGITAL TV
12)	5925.0000-6425.0000	H, V, L, R	8M00G7F	Tx	75.70	42.70	1		DIGITAL TV
13)	5925.0000-6425.0000	H, V, L, R	9M80G7F	Tx	76.60	42.70	1		DIGITAL TV
14)	5925.0000-6425.0000	H, V, L, R	1M00G7W	Tx	64.00	40.00	1		DIGITAL DATA, VIDEO OR VOICE
15)	5925.0000-6425.0000	H, V, L, R	72M0G7W	Tx	73.00	30.50	1		DIGITAL DATA, VIDEO OR VOICE
16)	5850.0000-5925.0000	H, V, L, R	1M00G7D	Tx	63.90	39.90	1		DIGITAL DATA, VIDEO OR VOICE
17)	5850.0000-5925.0000	H, V, L, R	72M0G7D	Tx	73.00	30.40	1		DIGITAL DATA, VIDEO OR VOICE
18)	3947.0000-3953.0000	R	850KFXD	Rx	0.00		1	90296	TELEMETRY & RANGING
19)	3700.0000-4200.0000	H, V, L, R	1M36G7W	Rx			1		DATA
20)	3700.0000-4200.0000	H, V, L, R	200KFXD	Rx			1		TT&C
21)	3700.0000-4200.0000	H, V, L, R	1M00G7W	Rx			1		DIGITAL DATA, VIDEO OR VOICE
22)	3700.0000-4200.0000	H, V, L, R	72M0G7W	Rx			1		DIGITAL DATA, VIDEO OR VOICE
23)	3625.0000-3700.0000	H, V, L, R	60M0G7D	Rx			1		DIGITAL DATA, VIDEO OR VOICE

**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)	5925.0000-6425.0000	58.0W	194.0W	11.4	-05.6	106.6	-258.4	8.9	1
2)	3700.0000-4200.0000	58.0W	194.0W	11.4	-05.6	106.6	-258.4	0	1
3)	5850.0000-5925.0000	58.0W	194.0W	11.4	-05.6	106.6	-258.4	8.9	1
4)	3625.0000-3700.0000	58.0W	194.0W	11.4	-05.6	106.6	-258.4	0	1



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**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		
5)	6173.7000-6176.3000	190.0W	-192.0W	08.7	-07.2	255.8	-257.1	11.37	1

**D) Points of Communications**

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

- 1) 1 to INTELSAT 901 (S2405) @ 18 degrees W.L. (U.S.-licensed)
- 2) 1 to INTELSAT 805 in AOR @ 304.5 E.L. satellite of the INTELSAT system (U.S.-licensed)
- 3) 1 to Permitted Space Station List
- 4) 1 to INTELSAT 903 (S2407) @ 34.5 degrees W.L. (U.S.-licensed)
- 5) 1 to PANAMSAT 4 (PAS-4) @ 191.0 W.L.(U.S.-licensed domestic satellite)
- 6) 1 to Permitted Space Station List
- 7) 1 to PANAMSAT 9 @ 58.0 W.L. S2380 (U.S.-licensed domestic satellite)
- 8) 1 to TDRS-5 (@ 174.3 W.L.) satellite(s) of the COLUMBIA system. (U.S.-licensed)
- 9) 1 to INTELSAT 905 (S2409) @ 24.5 degrees W.L. (U.S.-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)
1	1	1	15.2	VERTEX	15.2 KPC	7.62	15.39 AGL/ 23.01 AMSL	
Max Gains(s):		54.9 dBi @	3.9500 GHz	58.4 dBi @	6.1750 GHz			
Maximum total input power at antenna flange (Watts) =					3,225.00			
Maximum aggregate output EIRP for all carriers (dBW) =					93.50			

**G) Antenna Structure marking and lighting requirements:**

None unless otherwise specified under Special and General Provisions



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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:

- 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.
- 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.
- 2335 --- Authority is granted to receive any number of the specified emissions on any discrete frequencies within this band in accordance with the other terms and conditions of this authorization.
- 2454 --- All satellite uplink transmissions carrying broadband video information shall comply with the Automatic Transmitter Identification System (ATIS) requirements of Section 25.281 of the Rules, as modified by FCC Report No. DS-1066, released on April 3, 1991.
- 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).
- 5011 --- The Licensee(s) shall maintain on file with the Commission a current list or plan of the precise frequencies in use at the station, specifying for each frequency the RF center frequency, polarization, emission designator, nominal EIRP (in dBW) and maximum EIRP density (in dBW/4kHz). This list or plan may be submitted either on a station-by-station basis or on a system-wide basis and shall be updated within seven (7) days of any changes in frequency usage at this station. The Licensee(s) need not notify the Commission of temporary usage of frequencies for periods of less than seven (7) days. However, the Licensee(s) shall maintain accurate station records of the times and particulars of such temporary frequency usage.
- 5012 --- The authority granted here is limited to the operation of the facilities described above and does not include any authority to install and operate channelizing equipment or any other authority under Section 214 of the Communications Act of 1934, as amended, to establish channels of communications.
- 5014 --- With respect to potential co-channel interference to or from terrestrial microwave radio stations, the transmit and receive frequency bands listed in this license have been cleared for transmissions to and from satellites located in the geostationary or non-geostationary orbit for the emissions designated in Section B of this license.



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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:

- 5015 --- Upon completion of construction, each 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, date of the license and certification that the facility as authorized has been completed, that each antenna facility has been tested and is within 2 dB of the pattern specified in Section 25.209 and 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.
- 5017 --- Operation of this station is governed by the terms, conditions and limitations in Part 25 of the Commission's Rules and Regulations and the following additional conditions: 1. This license shall not vest in the Licensee(s) any right to operate the station or any right in the use of the frequencies designated in the license beyond its term or in any other manner than authorized in the license; 2. Neither the license nor the right granted under it shall be assigned or otherwise transferred in violation of the Commission's Rules and Regulations issued under it; and 3. This station is subject to the right of use or control conferred by Section 706 of the Communications Act of 1934, as amended.
- 5018 --- This license shall be forfeited automatically if this station is not ready for operation within the time specified unless, prior to the expiration date of this license, the Commission receives an Application for Additional Time to Construct a Radio Station (FCC Form 701) filed by the Licensee(s) showing good cause why the Licensee(s) could not complete construction on time.
- 5106 --- Digital Video with associated digital audio/data.
- 5107 --- Analog video with associated audio.
- 5203 --- All communications shall be in accordance with the satellites and services which have completed consultations under Article XIV(d) of the INTELSAT Agreement and which the Commission has approved.
- 5216 --- All operations shall be on a non-common carrier basis.
- 5220 --- All operations via TDRS-174 are restricted to the provision of capacity through the sale or lease of transponder capacity for communications not interconnected with the public-switched message networks (except for emergency restoration service) and shall be in accordance with the parameters summarized and conditions described in the INTELSAT Board of Governors document entitled "Article XIV (d) Consultation Concerning the Proposed Use of the Columbia Satellite System", BG-90-67E, August 27, 1991. This authorization is subject to all terms and conditions imposed on the Columbia satellite system by the Commission. This authorization is not to be construed as including any uplink or downlink authority in other countries, and all communications via TDRS-174 shall be between the US and those countries authorized in the above-referenced application which TDRS-174 is authorized by the Commission to serve.



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

- 5223 --- All operations via the PANAMSAT satellite system are restricted to the provision of capacity through the sale or lease of transponder capacity for communications not interconnected to the public switched network. This authorization is subject to all terms and conditions imposed on the PANAMSAT satellite system by the Commission. This authorization is not to be construed as including any uplink or downlink authority in other countries, and all communications via PANAMSAT satellite system shall be between the US and those countries authorized in the above-referenced application which PANAMSAT satellite system is authorized by the Commission to serve.
- 5225 --- This action constitutes the final step with respect to the provision of the services only insofar as the US regulatory process is concerned. However, this authority shall not be construed as authorizing the distribution of programming where the appropriate copyright clearances have not been obtained or where the U.S. Government has determined that appropriate copyright protection does not otherwise exist.
- 5822 --- The 3600-3650 MHz band is shared on a co-primary basis in the U.S. and Possessions with Federal Government radiolocation systems. Unacceptable interference may be caused to this earth station from radiolocation systems, including high-powered, highly mobile, shipborne and airborne radar transmitters, operating in the frequency band. Consistent with the applicant's EMC analysis (as required by US245 and based on the NTIA TR-99-361 Report, Technical Characteristics of Radiolocation Systems operating in the 3.1-3.7 GHz Band and Procedures for assessing EMC with Fixed Earth Station Receivers (available at <http://www.ntia.doc.gov/osmhome/reports.html>), the licensee accepts this potential for unacceptable interference. In the case that out-of-band interference does occur, the licensee is further aware that use of a RF filter ahead of the low noise amplifier (LNA) will limit potential out-of-band interference to its receiving earth station. Additionally, per US 245, in the band 3600-3650 MHz, these fixed-satellite service operations are limited to international inter-continental satellite systems.
- 5823 --- The 5850-5925 MHz band is shared in the U.S. and Possessions on a co-primary basis with Federal Government radiolocation systems. Unacceptable interference may be caused to this earth station's communication links from radiolocation systems, including high-powered land-based transportable and shipborne radar transmitters, operating in the frequency band in accordance with footnote G2. (See, e.g., NTIA Report Federal Radar Spectrum Requirements, (<http://www.ntia.doc.gov/osmhome/reports/ntia00-40/ntia00-40.pdf>), NTIA Report 83-115, Spectrum Resource Assessment in the 5650-5925 MHz Band ([http://www.fcc.gov/ib/srd/fedreg\\_ntiareport.html](http://www.fcc.gov/ib/srd/fedreg_ntiareport.html)), and FCC Fifth Notice of Inquiry in Preparation for a General World Administrative Conference in 1979 (Docket No. 20271; FCC 77-349)). As required by US245, the earth station licensee is aware of the EMC environment and this sharing situation with the radiolocation service and accepts the potential for unacceptable interference. Additionally, this fixed-satellite service earth station is limited to operations over international inter-continental satellite systems.
- 90012 --- Transmission and reception of TT&C signals using emission designators specified herein SES-MFS-20110204-00111 not at the edge of the 3700-4200 MHz (space to Earth) or 5925-6425 MHz (Earth to space) bands are granted only if a waiver of 47 C.F.R. § 25.202(g) has been granted to the U.S. licensed satellite.



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

90296 --- Limited only with Intelsat 805 (S2404) at 169° E.L. (191° W.L.) pursuant to the granted SAT-MOD-20151020-00072/SAT-AMD-201120-00077.

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.