



# PUBLIC NOTICE

FEDERAL COMMUNICATIONS COMMISSION  
445 12th STREET S.W.  
WASHINGTON D.C. 20554

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Report No. SES-02194

Wednesday August 28, 2019

## Satellite Communications Services re: Satellite Radio Applications Accepted For Filing

The applications listed herein have been found, upon initial review, to be acceptable for filing. The Commission reserves the right to return any of the applications if, upon further examination, it is determined they are defective and not in conformance with the Commission's Rules and Regulations and its Policies. Final action will not be taken on any of these applications earlier than 30 days following the date of this notice. 47 U.S.C. § 309(b). All applications accepted for filing will be assigned call signs, or other unique station identifiers. However, these assignments are for administrative purposes only and do not in any way prejudice Commission action.

**SES-ASG-20190731-01010** E E950174 Refuge Media Group  
Application for Consent to Assignment  
**Current Licensee:** Refuge Media Group  
**FROM:** Refuge Media Group  
**TO:** UNIVERSITY OF NORTHWESTERN - ST. PAUL

No. of Station(s) listed: 1

**SES-LIC-20190228-00193** E E190099 SES Americom, Inc.  
Application for Authority  
**Class of Station:** Fixed Earth Stations  
**Nature of Service:** Fixed Satellite Service

**SITE ID:** 1  
**LOCATION:** 58-350 Kamehameha Highway Comsat Road, Honolulu, Haleiwa, HI  
21 ° 40 ' 14.88 " N LAT. 158 ° 1 ' 55.72 " W LONG.

ANTENNA ID:	1	8.1 meters	Vertex Comm	KPC	
	10700.0000 - 12750.0000 MHz		36M0G7W	Digital Data Carrier	
	10700.0000 - 12750.0000 MHz		64K0G7W	Digital Data Carrier	
	14000.0000 - 14500.0000 MHz		64K0G7W	57.84 dBW	Digital Data Carrier
	14000.0000 - 14500.0000 MHz		36M0G7W	85.24 dBW	Digital Data Carrier

### Points of Communication:

1 - NSS-11 (S3037) - (176 E.L.)

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1 - PERMITTED LIST - ()

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**SES-LIC-20190321-00432** E E190133 Arctic Slope Telephone Association Cooperative, Inc.

Application for Authority

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

SITE ID: 1

LOCATION: 101 Tutunniagvik Street, North Slope Borough, Point Lay, AK  
69 ° 44 ' 25.70 " N LAT. 163 ° 0 ' 44.60 " W LONG.

ANTENNA ID:	1	3.8 meters	Viking	3.8 meter	
	3700.0000 - 4200.0000 MHz		3M40G7W	Digital Data Carrier	
	5925.0000 - 6425.0000 MHz		3M40G7W	59.21 dBW	Digital Data Carrier

**Points of Communication:**

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1 - PERMITTED LIST - ()

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**SES-LIC-20190321-00433** E E190134 Arctic Slope Telephone Association Cooperative, Inc.

Application for Authority

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

SITE ID: 1

LOCATION: 429 4th Street, North Slope Borough, Katovik, AK  
70 ° 7 ' 35.40 " N LAT. 143 ° 37 ' 1.10 " W LONG.

ANTENNA ID:	1	3.8 meters	Viking	3.8 meter	
	3700.0000 - 4200.0000 MHz		3M40G7W	Digital Data Carrier	
	5925.0000 - 6425.0000 MHz		3M40G7W	59.21 dBW	Digital Data Carrier

**Points of Communication:**

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1 - PERMITTED LIST - ()

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**SES-LIC-20190321-00434** E E190135 Arctic Slope Telephone Association Cooperative, Inc.

Application for Authority

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

SITE ID: 1

LOCATION: 1078 Summer Street, North Slope Borough, Anaktuvuk Pass, AK  
68 ° 8 ' 27.60 " N LAT. 151 ° 43 ' 58.60 " W LONG.

ANTENNA ID:	1	3.8 meters	Viking	3.8 meter
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3700.0000 - 4200.0000 MHz	3M40G7W		Digital Data Carrier
5925.0000 - 6425.0000 MHz	3M40G7W	59.21 dBW	Digital Data Carrier

**Points of Communication:**

1 - PERMITTED LIST - ()

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**SES-LIC-20190321-00441** E E190141 Arctic Slope Telephone Association Cooperative, Inc.

Application for Authority

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

SITE ID: 1

LOCATION: 725 Tikiluk Street, North Slope Borough, Atkasuk, AK  
 70 ° 28 ' 47.40 " N LAT. 157 ° 24 ' 57.70 " W LONG.

ANTENNA ID: 1 3.8 meters Viking 3.8 meter

3700.0000 - 4200.0000 MHz	3M40G7W		Digital Data Carrier
5925.0000 - 6425.0000 MHz	3M40G7W	59.21 dBW	Digital Data Carrier

**Points of Communication:**

1 - PERMITTED LIST - ()

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**SES-LIC-20190430-00558** E E190254 Mainstream Data, Inc.

Application for Authority

**Class of Station:** VSAT Network

**Nature of Service:** Fixed Satellite Service

SITE ID: HUB

LOCATION: 375 Chipeta Way Ste. B, Salt Lake, SALT LAKE CITY, UT  
 41 ° 45 ' 41.00 " N LAT. 111 ° 49 ' 26.00 " W LONG.

ANTENNA ID: HUB 7.6 meters Andrew ESA76-4LPK

11700.0000 - 12200.0000 MHz	2M70G7W	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
11700.0000 - 12200.0000 MHz	3M38G7W	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	2M70G7W	71.10 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	3M38G7W	72.10 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	800KG7D	49.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

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SITE ID: 2  
LOCATION: CONUS, Alaska, Hawaii. Puerto Rico, US V

ANTENNA ID:	2	0.96 meters	Skyware Global	960TX
	11700.0000 - 12200.0000 MHz	54M0G7D	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	200KG7D	44.20 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	400KG7D	44.20 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

SITE ID: 3  
LOCATION: CONUS, Alaska, Hawaii. Puerto Rico, US V

ANTENNA ID:	3	0.98 meters	PRODELIN	1981
	11700.0000 - 12200.0000 MHz	54M0G7D	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	200KG7D	44.30 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	400KG7D	44.30 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

SITE ID: 4  
LOCATION: CONUS, Alaska, Hawaii. Puerto Rico, US V

ANTENNA ID:	4	1.2 meters	PRODELIN	1134
	11700.0000 - 12200.0000 MHz	54M0G7D	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	1M60G7D	49.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	200KG7D	46.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	400KG7D	49.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	800KG7D	49.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

SITE ID: 5  
LOCATION: CONUS, Alaska, Hawaii. Puerto Rico, US V

ANTENNA ID:	5	1.8 meters	SKYWARE GLOBAL	180TX
	11700.0000 - 12200.0000 MHz	54M0G7D	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

14000.0000 - 14500.0000 MHz	200KG7D	49.80 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	400KG7D	52.80 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	800KG7D	52.80 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	1M60G7D	52.80 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

SITE ID: 6  
LOCATION: CONUS, Alaska, Hawaii. Puerto Rico, US V

ANTENNA ID: 6	1.8 meters	PRODELIN	180TX
11700.0000 - 12200.0000 MHz	54M0G7D	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	1M60G7D	52.50 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	200KG7D	49.50 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	800KG7D	52.50 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	400KG7D	52.50 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

SITE ID: 7  
LOCATION: CONUS, Alaska, Hawaii. Puerto Rico, US V

ANTENNA ID: 7	1.2 meters	SKYWARE GLOBAL	122/123/124/125
11700.0000 - 12200.0000 MHz	54M0G7D	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	200KG7D	46.30 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	400KG7D	49.30 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	800KG7D	49.30 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	1M60G7D	49.30 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

SITE ID: 8  
LOCATION: CONUS, Alaska, Hawaii. Puerto Rico, US V

ANTENNA ID: 8	2.4 meters	SKYWARE GLOBAL	224 Ku
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11700.0000 - 12200.0000 MHz	54M0G7D	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	1M60G7D	55.20 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	200KG7D	52.20 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	800KG7D	55.20 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	400KG7D	55.20 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

SITE ID: 9  
LOCATION: CONUS, Alaska, Hawaii. Puerto Rico, US V

ANTENNA ID: 9                      1.2 meters                      AVL TECHNOLOGIES                      1278

11700.0000 - 12200.0000 MHz	54M0G7D	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	1M60G7D	49.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	200KG7D	46.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	400KG7D	49.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	800KG7D	49.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

SITE ID: 10  
LOCATION: CONUS, Alaska, Hawaii. Puerto Rico, US V

ANTENNA ID: 10                      1.2 meters                      AVL TECHNOLOGIES                      1278FD

14000.0000 - 14500.0000 MHz	1M60G7D	49.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	200KG7D	46.18 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	400KG7D	49.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
14000.0000 - 14500.0000 MHz	800KG7D	49.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
11700.0000 - 12200.0000 MHz	54M0G7D	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

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SITE ID: 11  
LOCATION: CONUS, Alaska, Hawaii. Puerto Rico, US V

ANTENNA ID:	11	2.4 meters	PRODELIN	1251
	11700.0000 - 12200.0000 MHz	54M0G7D	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	1M60G7D	55.30 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	200KG7D	52.30 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	400KG7D	55.30 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	800KG7D	55.30 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

SITE ID: 12  
LOCATION: CONUS, Alaska, Hawaii. Puerto Rico, US V

ANTENNA ID:	12	0.98 meters	iNetVu	980+
	10950.0000 - 12200.0000 MHz	54M0G7D	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	200KG7D	44.30 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	400KG7D	44.30 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

SITE ID: 13  
LOCATION: CONUS, Alaska, Hawaii. Puerto Rico, US V

ANTENNA ID:	13	1.2 meters	iNetVu	1200
	10950.0000 - 12200.0000 MHz	54M0G7D	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	1M60G7D	49.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	200KG7D	45.98 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	400KG7D	49.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	800KG7D	49.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

SITE ID: 14  
LOCATION: CONUS, Alaska, Hawaii. Puerto Rico, US V

ANTENNA ID:	14	0.98 meters	iNetVu	FLY-981
	10950.0000 - 12200.0000 MHz	54M0G7D	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14500.0000 - 14500.0000 MHz	200KG7D	44.18 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	400KG7D	44.30 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

SITE ID: 15  
LOCATION: CONUS, Alaska, Hawaii. Puerto Rico, US V

ANTENNA ID:	15	1 meters	AVL TECHNOLOGIES	1078
	11700.0000 - 12200.0000 MHz	54M0G7D	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	200KG7D	44.30 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	400KG7D	44.30 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

SITE ID: 1  
LOCATION: CONUS, Alaska, Hawaii. Puerto Rico, US V

ANTENNA ID:	1	1.2 meters	iNetVu	FLY-1202
	10950.0000 - 12200.0000 MHz	54M0G7D	0.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	1M60G7D	49.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	200KG7D	46.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK
	14000.0000 - 14500.0000 MHz	400KG7D	49.00 dBW	QPSK DVB/MPE Encapsulated IP Data/8PSK, 16APSK

**Points of Communication:**

- 1 - PERMITTED LIST - ()
- 10 - PERMITTED LIST - ()
- 11 - PERMITTED LIST - ()
- 12 - PERMITTED LIST - ()
- 13 - PERMITTED LIST - ()
- 14 - PERMITTED LIST - ()



- 15 - PERMITTED LIST - ()
- 2 - PERMITTED LIST - ()
- 3 - PERMITTED LIST - ()
- 4 - PERMITTED LIST - ()
- 5 - PERMITTED LIST - ()
- 6 - PERMITTED LIST - ()
- 7 - PERMITTED LIST - ()
- 8 - PERMITTED LIST - ()
- 9 - PERMITTED LIST - ()
- HUB - PERMITTED LIST - ()

**SES-LIC-20190612-00769** E E190490 Swarm Technologies, Inc.

Application for Authority

**Class of Station:** Blanket Earth Stations

**Nature of Service:** Mobile Satellite Service

Swarm Technologies, Inc. (Swarm) seeks blanket authority to operate up to 1,000,000 Customer Mobile Earth Stations (CMES) that will communicate over multiple channels with its non-geostationary, non-voice mobile-satellite service system, which consists of 150 satellites in low Earth orbit operating in the sub-bands identified in the Table 1 of the "Narrative" attachment to this application within the 137-138 MHz (space-to-Earth) and 148-149.95 MHz (Earth-to-space) frequency bands. Swarm's application to launch and operate this satellite system is currently pending (see IBFS File No. SAT-LOA-20181221-00094).

**SITE ID:** Blanket License 1

**LOCATION:** Continental United States, Alaska, Hawaii

<b>ANTENNA ID:</b>	W1/4-2IN	0.05 meters	Various	Various	
	137.0000 - 138.0000 MHz		7K80F1D	0.00 dBW	FSK / data (non-voice)
	137.0000 - 138.0000 MHz		125KF1D	0.00 dBW	FSK / data (non-voice)
	148.0000 - 149.9500 MHz		7K80F1D	-3.00 dBW	FSK / data (non-voice)
	148.0000 - 149.9500 MHz		250KF1D	-3.00 dBW	FSK / data (non-voice)
<b>ANTENNA ID:</b>	W1/4-4IN	0.1 meters	Various	Various	
	137.0000 - 138.0000 MHz		7K80F1D	0.00 dBW	FSK / data (non-voice)
	137.0000 - 138.0000 MHz		125KF1D	0.00 dBW	FSK / data (non-voice)
	148.0000 - 149.9500 MHz		7K80F1D	-1.00 dBW	FSK / data (non-voice)
	148.0000 - 149.9500 MHz		250KF1D	-1.00 dBW	FSK / data (non-voice)

ANTENNA ID:	W1/4-6IN	0.15 meters	Various	Various	
	137.0000 - 138.0000 MHz		7K80F1D	0.00 dBW	FSK / data (non-voice)
	137.0000 - 138.0000 MHz		125KF1D	0.00 dBW	FSK / data (non-voice)
	148.0000 - 149.9500 MHz		7K80F1D	0.99 dBW	FSK / data (non-voice)
	148.0000 - 149.9500 MHz		250KF1D	0.99 dBW	FSK / data (non-voice)
ANTENNA ID:	W1/4-8IN	0.2 meters	Various	Various	
	137.0000 - 138.0000 MHz		7K80F1D	0.00 dBW	FSK / data (non-voice)
	137.0000 - 138.0000 MHz		125KF1D	0.00 dBW	FSK / data (non-voice)
	148.0000 - 149.9500 MHz		7K80F1D	5.00 dBW	FSK / data (non-voice)
	148.0000 - 149.9500 MHz		250KF1D	5.00 dBW	FSK / data (non-voice)
ANTENNA ID:	W1/4	0.55 meters	Various	Various	
	137.0000 - 138.0000 MHz		7K80F1D	0.00 dBW	FSK / data
	137.0000 - 138.0000 MHz		125KF1D	0.00 dBW	FSK / data (non-voice)
	148.0000 - 149.9500 MHz		7K80F1D	9.00 dBW	FSK / data (non-voice)
	148.0000 - 149.9500 MHz		250KF1D	9.00 dBW	FSK / data (non-voice)
ANTENNA ID:	W1/2	1.1 meters	Various	Various	
	137.0000 - 138.0000 MHz		7K80F1D	0.00 dBW	FSK / data (non-voice)
	137.0000 - 138.0000 MHz		125KF1D	0.00 dBW	FSK / data (non-voice)
	148.0000 - 149.9500 MHz		7K80F1D	9.00 dBW	FSK / data (non-voice)
	148.0000 - 149.9500 MHz		250KF1D	9.00 dBW	FSK / data (non-voice)
ANTENNA ID:	FLATPANEL	0.2 meters	Various	Various	
	137.0000 - 138.0000 MHz		7K80F1D	0.00 dBW	FSK / data (non-voice)
	137.0000 - 138.0000 MHz		125KF1D	0.00 dBW	FSK / data (non-voice)
	148.0000 - 149.9500 MHz		7K80F1D	9.00 dBW	FSK / data (non-voice)
	148.0000 - 149.9500 MHz		250KF1D	9.00 dBW	FSK / data (non-voice)
ANTENNA ID:	H-DIPOLE	1.1 meters	Various	Various	

137.0000 - 138.0000 MHz	7K80F1D	0.00 dBW	FSK / data (non-voice)
137.0000 - 138.0000 MHz	125KF1D	0.00 dBW	FSK / data (non-voice)
148.0000 - 149.9500 MHz	7K80F1D	7.00 dBW	FSK / data (non-voice)
148.0000 - 149.9500 MHz	250KF1D	7.00 dBW	FSK / data (non-voice)
ANTENNA ID: COLINEAR	3.1 meters	Various	Various
137.0000 - 138.0000 MHz	7K80F1D	0.00 dBW	FSK / data (non-voice)
137.0000 - 138.0000 MHz	125KF1D	0.00 dBW	FSK / data (non-voice)
148.0000 - 149.9500 MHz	7K80F1D	12.50 dBW	FSK / data (non-voice)
148.0000 - 149.9500 MHz	250KF1D	12.50 dBW	FSK / data (non-voice)

**Points of Communication:**

Blanket License 1 - Swarm (S3041) - (NGSO)

**SES-MFS-20181128-03302** E E100089 Panasonic Avionics Corporation

Modification

**Class of Station:** Other

**Nature of Service:** Earth Station Aboard Aircraft, Fixed Satellite Service

Panasonic Avionics Corporation (Panasonic) requests modification of its earth stations aboard aircraft ESAA blanket license by adding the following satellites as points of communication for its previously licensed PPA and SPA ESAA terminals: Apstar 6C at the 134° E.L. orbital location in the 12.25-12.75 GHz frequency band; Apstar 6D at the 134° E. L. orbital location in the 10.7-12.75 GHz frequency band; AsiaSat 9 at the 122° E.L. orbital location in the 10.95-11.2 GHz, 11.45-11.7 GHz, and 12.25-12.75 GHz frequency bands; ChinaSat 10 at the 110.5° E.L. orbital location in the 12.25-12.75 GHz frequency band; SES-12 at the 95° E.L. orbital location in the 10.7-11.45 GHz frequency band; and SES-14 at the 47.5° W.L. orbital location in the 10.95-11.2 and 11.45-12.45 GHz frequency bands. Panasonic requests a waiver of orbital debris requirements due to the Apstar 6C satellite's inability to vent stored energy at end-of-life.

SITE ID: MELCO Remotes

LOCATION: US&P, International waters, US&P, International

ANTENNA ID: MELCO	0.68 meters	Mitsubishi Electronics	726-20176-101
14000.0000 - 14400.0000 MHz	9M00G7D	42.15 dBW	BPSK, QPSK DIGITAL DATA
14000.0000 - 14400.0000 MHz	500KG7D	32.70 dBW	BPSK, QPSK DIGITAL DATA
10950.0000 - 11200.0000 MHz	1M20G7D		BPSK, QPSK DIGITAL DATA
10950.0000 - 11200.0000 MHz	27M0G7D		BPSK, QPSK DIGITAL DATA
10950.0000 - 11200.0000 MHz	54M0G7D		BPSK, QPSK DIGITAL DATA
11450.0000 - 12200.0000 MHz	1M20G7D		BPSK, QPSK DIGITAL DATA
11450.0000 - 12200.0000 MHz	27M0G7D		BPSK, QPSK DIGITAL DATA

11450.0000 - 12200.0000 MHz	54M0G7D		BPSK, QPSK DIGITAL DATA
11700.0000 - 12200.0000 MHz	1M20G7D		BPSK, QPSK DIGITAL DATA
11700.0000 - 12200.0000 MHz	54M0G7D		BPSK, QPSK DIGITAL DATA
14000.0000 - 14400.0000 MHz	9M00G7D	39.85 dBW	BPSK, QPSK
14000.0000 - 14400.0000 MHz	500KG7D	27.30 dBW	BPSK, QPSK

SITE ID: PPA Remotes  
LOCATION: US&P, International waters, US&P, International

ANTENNA ID:	PPA	0.89 meters	PANASONIC	AURA LE
14000.0000 - 14500.0000 MHz	500KG7D	44.50 dBW	BPSK, SPREAD SPECTRUM	
14000.0000 - 14500.0000 MHz	9M00G7D	48.00 dBW	BPSK, SPREAD SPECTRUM	
11450.0000 - 12750.0000 MHz	36M0G7D		PSK	
14000.0000 - 14500.0000 MHz	9M00G7D	48.00 dBW	BPSK, SPREAD SPECTRUM	
10700.0000 - 12750.0000 MHz	1M20G7D		PSK	
10700.0000 - 12750.0000 MHz	36M0G7D		PSK	
10700.0000 - 12750.0000 MHz	54M0G7D		PSK	
12500.0000 - 12750.0000 MHz	1M20G7D		PSK	
12250.0000 - 12750.0000 MHz	54M0G7D		PSK	
12250.0000 - 12750.0000 MHz	1M20G7D		PSK	
11700.0000 - 12200.0000 MHz	54M0G7D		PSK	
11700.0000 - 12200.0000 MHz	1M20G7D		PSK	
11450.0000 - 12750.0000 MHz	27M0G7D		PSK	
11450.0000 - 12750.0000 MHz	1M20G7D		PSK	
10950.0000 - 11700.0000 MHz	54M0G7D		PSK	
10950.0000 - 11700.0000 MHz	1M20G7D		PSK	
10950.0000 - 11200.0000 MHz	27M0G7D		PSK	
11700.0000 - 12200.0000 MHz	36M0G7D		PSK	
10950.0000 - 12500.0000 MHz	54M0G7D		PSK	

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10950.0000 - 12500.0000 MHz	36M0G7D		PSK
10950.0000 - 12500.0000 MHz	1M20G7D		PSK
10950.0000 - 12200.0000 MHz	54M0G7D		PSK
10950.0000 - 12200.0000 MHz	1M20G7D		PSK
10950.0000 - 11200.0000 MHz	48M6G7D		PSK
11450.0000 - 12200.0000 MHz	1M20G7D		PSK
11450.0000 - 12200.0000 MHz	48M6G7D		PSK
11450.0000 - 12200.0000 MHz	54M0G7D		PSK
12500.0000 - 12600.0000 MHz	1M20G7D		PSK
12500.0000 - 12600.0000 MHz	48M6G7D		PSK
12500.0000 - 12600.0000 MHz	54M0G7D		PSK
10950.0000 - 11200.0000 MHz	1M20G7D		PSK
14000.0000 - 14500.0000 MHz	21M0G7D	48.00 dBW	QPSK
10700.0000 - 12750.0000 MHz	1M05G7D		QPSK, 16APSK
10950.0000 - 11200.0000 MHz	1M05G7D		QPSK, 16APSK
10950.0000 - 11200.0000 MHz	72M0G7D		QPSK, 16APSK
10950.0000 - 11700.0000 MHz	1M05G7D		QPSK, 16APSK
10950.0000 - 12200.0000 MHz	112MG7D		QPSK, 16APSK
10950.0000 - 12200.0000 MHz	1M05G7D		QPSK, 16APSK
11200.0000 - 11450.0000 MHz	139MG7D		QPSK, 16APSK
11200.0000 - 11450.0000 MHz	54M0G7D		QPSK, 16APSK
11450.0000 - 11700.0000 MHz	1M05G7D		QPSK, 16APSK
11450.0000 - 12200.0000 MHz	1M05G7D		QPSK, 16APSK
11450.0000 - 12200.0000 MHz	97M2G7D		QPSK, 16APSK
11450.0000 - 12750.0000 MHz	72M0G7D		QPSK, 16APSK
12200.0000 - 12750.0000 MHz	139MG7D		QPSK, 16APSK

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12200.0000 - 12750.0000 MHz	54M0G7D		QPSK, 16APSK
12250.0000 - 12750.0000 MHz	72M0G7D		QPSK, 16APSK
12500.0000 - 12750.0000 MHz	72M0G7D		QPSK, 16APSK
14000.0000 - 14500.0000 MHz	32K0G7D	35.96 dBW	QPSK
10700.0000 - 12200.0000 MHz	139MG7D		QPSK, 16APSK
10700.0000 - 12200.0000 MHz	1M05G7D		QPSK, 16APSK
10950.0000 - 11200.0000 MHz	139MG7D		QPSK, 16APSK
10950.0000 - 11200.0000 MHz	54M0G7D		QPSK, 16APSK
10950.0000 - 11200.0000 MHz	97M2G7D		QPSK, 16APSK
10950.0000 - 11700.0000 MHz	72M0G7D		QPSK, 16APSK
10950.0000 - 12200.0000 MHz	125MG7D		QPSK, 16APSK
10950.0000 - 12200.0000 MHz	36M0G7W		QPSK, 16APSK
11200.0000 - 11450.0000 MHz	1M05G7D		QPSK, 16APSK
11450.0000 - 11700.0000 MHz	139MG7D		QPSK, 16APSK
11450.0000 - 11700.0000 MHz	1M05G7D		QPSK, 16APSK
11450.0000 - 11700.0000 MHz	54M0G7D		QPSK, 16APSK
11450.0000 - 12200.0000 MHz	27M0G7D		QPSK, 16APSK
11450.0000 - 12200.0000 MHz	36M0G7D		QPSK, 16APSK
11450.0000 - 12750.0000 MHz	1M05G7D		QPSK, 16APSK
11700.0000 - 12200.0000 MHz	1M05G7D		QPSK, 16APSK
12200.0000 - 12750.0000 MHz	1M05G7D		QPSK, 16APSK
12200.0000 - 12750.0000 MHz	36M0G7D		QPSK, 16APSK
12250.0000 - 12750.0000 MHz	1M50G7D		QPSK, 16APSK
12500.0000 - 12600.0000 MHz	1M05G7D		QPSK, 16APSK
12500.0000 - 12600.0000 MHz	97M2G7D		QPSK, 16APSK
12500.0000 - 12750.0000 MHz	1M05G7D		QPSK, 16APSK

12500.0000 - 12750.0000 MHz	54M0G7D	QPSK, 16APSK
12250.0000 - 12750.0000 MHz	1M05G7D	QPSK, 16APSK
11450.0000 - 12450.0000 MHz	1M05G7D	QPSK, 16APSK
11450.0000 - 12450.0000 MHz	139MG7D	QPSK, 16APSK
10700.0000 - 12750.0000 MHz	139MG7D	QPSK, 16APSK
10700.0000 - 11450.0000 MHz	1M05G7D	QPSK, 16APSK
10700.0000 - 11450.0000 MHz	139MG7D	QPSK, 16APSK

SITE ID: SPA Remotes  
LOCATION: U.S. AND INTERNATIONAL AIRSPACE, US & International A

ANTENNA ID:	SPA	0.949 meters	PANASONIC	SPA
14000.0000 - 14500.0000 MHz	500KG7D	45.00 dBW		QPSK, 8PSK, 16APSK
14000.0000 - 14500.0000 MHz	9M00G7D	45.00 dBW		QPSK, 8PSK, 16APSK
10700.0000 - 12750.0000 MHz	1M20G7D			QPSK, 8PSK, 16APSK
10700.0000 - 12750.0000 MHz	36M0G7D			QPSK, 8PSK, 16APSK
10950.0000 - 11700.0000 MHz	1M20G7D			QPSK, 8PSK, 16APSK
10950.0000 - 11700.0000 MHz	54M0G7D			QPSK, 8PSK, 16APSK
10950.0000 - 12500.0000 MHz	1M20G7D			QPSK, 8PSK, 16APSK
10950.0000 - 12500.0000 MHz	54M0G7D			QPSK, 8PSK, 16APSK
11450.0000 - 11700.0000 MHz	1M20G7D			QPSK, 8PSK, 16APSK
11450.0000 - 11950.0000 MHz	1M20G7D			QPSK, 8PSK, 16APSK
11450.0000 - 11950.0000 MHz	54M0G7D			QPSK, 8PSK, 16APSK
11450.0000 - 12200.0000 MHz	1M20G7D			QPSK, 8PSK, 16APSK
11450.0000 - 12200.0000 MHz	54M0G7D			QPSK, 8PSK, 16APSK
11450.0000 - 12750.0000 MHz	1M20G7D			QPSK, 8PSK, 16APSK
11450.0000 - 12750.0000 MHz	36M0G7D			QPSK, 8PSK, 16APSK
11450.0000 - 12750.0000 MHz	54M0G7D			QPSK, 8PSK, 16APSK
11700.0000 - 12200.0000 MHz	1M20G7D			QPSK, 8PSK, 16APSK

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11700.0000 - 12200.0000 MHz	36M0G7D		QPSK, 8PSK, 16APSK
11700.0000 - 12200.0000 MHz	54M0G7D		QPSK, 8PSK, 16APSK
12200.0000 - 12750.0000 MHz	1M20G7D		QPSK, 8PSK, 16APSK
12200.0000 - 12750.0000 MHz	36M0G7D		QPSK, 8PSK, 16APSK
12250.0000 - 12750.0000 MHz	1M20G7D		QPSK, 8PSK, 16APSK
12250.0000 - 12750.0000 MHz	54M0G7D		QPSK, 8PSK, 16APSK
12500.0000 - 12750.0000 MHz	36M0G7D		QPSK, 8PSK, 16APSK
12500.0000 - 12600.0000 MHz	1M20G7D		QPSK, 8PSK, 16APSK
12500.0000 - 12600.0000 MHz	48M6G7D		QPSK, 8PSK, 16APSK
12500.0000 - 12600.0000 MHz	54M0G7D		QPSK, 8PSK, 16APSK
10950.0000 - 11200.0000 MHz	1M20G7D		QPSK, 8PSK, 16APSK
10950.0000 - 11200.0000 MHz	48M6G7D		QPSK, 8PSK, 16APSK
11450.0000 - 12200.0000 MHz	48M6G7D		QPSK, 8PSK, 16APSK
12500.0000 - 12750.0000 MHz	1M20G7D		QPSK, 8PSK, 16APSK
14000.0000 - 14500.0000 MHz	21M0G7D	45.00 dBW	QPSK
14000.0000 - 14500.0000 MHz	32K0G7D	34.21 dBW	QPSK
10700.0000 - 12750.0000 MHz	1M05G7D		QPSK, 16APSK
10950.0000 - 11200.0000 MHz	54M0G7D		QPSK, 16APSK
10950.0000 - 11700.0000 MHz	1M05G7D		QPSK, 16APSK
10950.0000 - 12200.0000 MHz	125MG7D		QPSK, 16APSK
11200.0000 - 11450.0000 MHz	139MG7D		QPSK, 16APSK
11450.0000 - 11700.0000 MHz	139MG7D		QPSK, 16APSK
11450.0000 - 11950.0000 MHz	1M05G7D		QPSK, 16APSK
11450.0000 - 12200.0000 MHz	27M0G7D		QPSK, 16APSK
12200.0000 - 12750.0000 MHz	54M0G7D		QPSK, 16APSK
12500.0000 - 12600.0000 MHz	97M2G7D		QPSK, 16APSK



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12500.0000 - 12750.0000 MHz	72M0G7D	QPSK, 16APSK
10700.0000 - 12200.0000 MHz	139MG7D	QPSK, 16APSK
10950.0000 - 11200.0000 MHz	72M0G7D	QPSK, 16APSK
10950.0000 - 11700.0000 MHz	139MG7D	QPSK, 16APSK
10950.0000 - 12200.0000 MHz	112MG7D	QPSK, 16APSK
10950.0000 - 12200.0000 MHz	27M0G7W	QPSK, 16APSK
11200.0000 - 11450.0000 MHz	54M0G7D	QPSK, 16APSK
11450.0000 - 11700.0000 MHz	1M05G7D	QPSK, 16APSK
11450.0000 - 11950.0000 MHz	72M0G7D	QPSK, 16APSK
11450.0000 - 12200.0000 MHz	97M2G7D	QPSK, 16APSK
12250.0000 - 12750.0000 MHz	72M0G7D	QPSK, 16APSK
10700.0000 - 12200.0000 MHz	1M05G7D	QPSK, 16APSK
10950.0000 - 11200.0000 MHz	139MG7D	QPSK, 16APSK
10950.0000 - 11200.0000 MHz	1M05G7D	QPSK, 16APSK
10950.0000 - 11200.0000 MHz	97M2G7D	QPSK, 16APSK
10950.0000 - 11700.0000 MHz	72M0G7D	QPSK, 16APSK
10950.0000 - 12200.0000 MHz	1M05G7D	QPSK, 16APSK
11200.0000 - 11450.0000 MHz	1M05G7D	QPSK, 16APSK
11450.0000 - 11700.0000 MHz	54M0G7D	QPSK, 16APSK
11450.0000 - 12200.0000 MHz	1M05G7D	QPSK, 16APSK
11700.0000 - 12200.0000 MHz	1M05G7D	QPSK, 16APSK
12200.0000 - 12750.0000 MHz	139MG7D	QPSK, 16APSK
12200.0000 - 12750.0000 MHz	1M05G7D	QPSK, 16APSK
12500.0000 - 12600.0000 MHz	1M50G7D	QPSK, 16APSK
12500.0000 - 12750.0000 MHz	1M05G7D	QPSK, 16APSK
12500.0000 - 12750.0000 MHz	54M0G7D	QPSK, 16APSK

12250.0000 - 12750.0000 MHz	1M05G7D	QPSK, 16APSK
11450.0000 - 12450.0000 MHz	1M05G7D	QPSK, 16APSK
11450.0000 - 12450.0000 MHz	139MG7D	QPSK, 16APSK
10700.0000 - 12750.0000 MHz	139MG7D	QPSK, 16APSK
10700.0000 - 11450.0000 MHz	1M05G7D	QPSK, 16APSK
10700.0000 - 11450.0000 MHz	139MG7D	QPSK, 16APSK

SITE ID:           TECOM Remotes  
LOCATION:         US&P, International waters, US&P, International

ANTENNA ID:	TECOM	0.62 meters	TECOM	KU-STREAM 1000
14000.0000 - 14500.0000 MHz	9M00G7D	43.80 dBW		BPSK, QPSK DIGITAL DATA
10950.0000 - 11200.0000 MHz	1M20G7D			QPSK, 8PSK, 16APSK
10950.0000 - 11200.0000 MHz	54M0G7D			QPSK, 8PSK, 16APSK
10950.0000 - 11700.0000 MHz	1M20G7D			QPSK, 8PSK, 16APSK
10950.0000 - 11700.0000 MHz	54M0G7D			QPSK, 8PSK, 16APSK
10950.0000 - 12200.0000 MHz	1M20G7D			QPSK, 8PSK, 16APSK
10950.0000 - 12200.0000 MHz	54M0G7D			QPSK, 8PSK, 16APSK
11450.0000 - 11700.0000 MHz	1M20G7D			QPSK, 8PSK, 16APSK
11450.0000 - 11700.0000 MHz	54M0G7D			QPSK, 8PSK, 16APSK
11450.0000 - 12200.0000 MHz	1M20G7D			QPSK, 8PSK, 16APSK
11450.0000 - 12200.0000 MHz	54M0G7D			QPSK, 8PSK, 16APSK
11700.0000 - 12200.0000 MHz	1M20G7D			QPSK, 8PSK, 16APSK
11700.0000 - 12200.0000 MHz	36M0G7D			QPSK, 8PSK, 16APSK
14000.0000 - 14500.0000 MHz	500KG7D	43.80 dBW		BPSK, QPSK DIGITAL DATA
10700.0000 - 12200.0000 MHz	139MG7D			QPSK, 16APSK
10950.0000 - 11200.0000 MHz	1M05G7D			QPSK, 16APSK
10950.0000 - 12200.0000 MHz	27M0G7W			QPSK, 16APSK
11200.0000 - 11450.0000 MHz	1M05G7D			QPSK, 16APSK

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11450.0000 - 11700.0000 MHz	139MG7D		QPSK, 16APSK
11450.0000 - 12200.0000 MHz	27M0G7D		QPSK, 16APSK
11450.0000 - 12200.0000 MHz	36M0G7D		QPSK, 16APSK
11700.0000 - 12200.0000 MHz	54M0G7D		QPSK, 16APSK
12200.0000 - 12750.0000 MHz	1M50G7D		QPSK, 16APSK
14000.0000 - 14500.0000 MHz	21M0G7D	43.80 dBW	QPSK
14000.0000 - 14500.0000 MHz	32K0G7D	40.39 dBW	QPSK
10700.0000 - 12200.0000 MHz	1M05G7D		QPSK, 16APSK
10950.0000 - 11200.0000 MHz	139MG7D		QPSK, 16APSK
10950.0000 - 11700.0000 MHz	1M05G7D		QPSK, 16APSK
11200.0000 - 11450.0000 MHz	139MG7D		QPSK, 16APSK
11200.0000 - 11450.0000 MHz	54M0G7D		QPSK, 16APSK
11450.0000 - 11700.0000 MHz	1M05G7D		QPSK, 16APSK
11450.0000 - 12200.0000 MHz	1M05G7D		QPSK, 16APSK
11700.0000 - 12200.0000 MHz	1M50G7D		QPSK, 16APSK
12200.0000 - 12750.0000 MHz	139MG7D		QPSK, 16APSK
12200.0000 - 12750.0000 MHz	54M0G7D		QPSK, 16APSK
10950.0000 - 12200.0000 MHz	1M05G7D		QPSK, 16APSK

**Points of Communication:**

MELCO Remotes - E117 WA (S2873) - (116.8 W.L.)

MELCO Remotes - ESTRELA DO SUL 2 - (63 W.L.)

MELCO Remotes - TELSTAR 11N (S2357) - (37.5 W.L.)

PPA Remotes - ANIK G1 - (107.3 W.L.)

PPA Remotes - APSTAR 6 - (226 W.L.)

PPA Remotes - APSTAR 6C - (134 E.L.)

PPA Remotes - Apstar 7 - (76.5 E.L.)

PPA Remotes - AsiaSat 5 - (100.5E)

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PPA Remotes - AsiaSat 7 - (105.5 E.L.)

PPA Remotes - AsiaSat-9 - (122 E.L.)

PPA Remotes - E117 WA (S2873) - (116.8 W.L.)

PPA Remotes - ESTRELA DO SUL 2 - (63 W.L.)

PPA Remotes - Eutelsat 10A (W2A) - (10.0 E.L.)

PPA Remotes - Eutelsat 70B - (70.5 E.L.)

PPA Remotes - EUTELSAT115WB(S2938) - (114.9 W.L.)

PPA Remotes - EUTELSAT172B(S3021) - (172 E.L.)

PPA Remotes - Express AM5 - (140.0 E. L)

PPA Remotes - Express AM6 - (53.0 E.L.)

PPA Remotes - GALAXY 16 (S2687) - (99 W.L.)

PPA Remotes - INTELSAT 14 (S2785) - (45.0 W.L.)

PPA Remotes - INTELSAT 15 (S2789) - (85.15 E.L.)

PPA Remotes - INTELSAT 21 (S2863) - (58.0 W.L.)

PPA Remotes - INTELSAT 29e (S2913) - (50.0 W.L.)

PPA Remotes - INTELSAT 33e (S2939) - (60.0 E.L.)

PPA Remotes - JCSAT 5A - (132 E.L.)

PPA Remotes - JCSAT-2B - (154 E.L.)

PPA Remotes - NSS-6 - (95 E.L.)

PPA Remotes - OTHER -

PPA Remotes - OTHER -

PPA Remotes - PERMITTED LIST - ()

PPA Remotes - SES-12 (M192103) - (95 E.L.)

PPA Remotes - SES-14 (S2974) - (47.5 W.L.)

PPA Remotes - SES-15 (S2951) - (129.15 W.L.)

PPA Remotes - Superbird C2 - (144 E.L.)

PPA Remotes - TELSTAR 11N (S2357) - (37.5 W.L.)

PPA Remotes - TELSTAR 12 V (S2933) - (15 W.L.)

PPA Remotes - Yamal 300K - (177 W.L.)

PPA Remotes - Yamal 401 - (90 E.L.)

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SPA Remotes - ANIK G1 - (107.3 W.L.)

SPA Remotes - APSTAR 6 - (226 W.L.)

SPA Remotes - APSTAR 6C - (134 E.L.)

SPA Remotes - APSTAR 6C - (134 E.L.)

SPA Remotes - Apstar 7 - (76.5 E.L.)

SPA Remotes - AsiaSat 5 - (100.5E)

SPA Remotes - AsiaSat 7 - (105.5 E.L.)

SPA Remotes - AsiaSat-9 - (122 E.L)

SPA Remotes - E117 WA (S2873) - (116.8 W.L.)

SPA Remotes - ESTRELA DO SUL 2 - (63 W.L.)

SPA Remotes - Eutelsat 10A (W2A) - (10.0 E.L.)

SPA Remotes - EUTELSAT 172A(S2610) - (174 E. L.)

SPA Remotes - Eutelsat 70B - (70.5 E.L.)

SPA Remotes - EUTELSAT115WB(S2938) - (114.9 W.L.)

SPA Remotes - EUTELSAT172B(S3021) - (172 E.L.)

SPA Remotes - Express AM5 - (140.0 E. L)

SPA Remotes - Express AM6 - (53.0 E.L.)

SPA Remotes - GALAXY 16 (S2687) - (99 W.L.)

SPA Remotes - INTELSAT 14 (S2785) - (45.0 W.L.)

SPA Remotes - INTELSAT 15 (S2789) - (85.15 E.L.)

SPA Remotes - INTELSAT 21 (S2863) - (58.0 W.L.)

SPA Remotes - INTELSAT 29e (S2913) - (50.0 W.L.)

SPA Remotes - INTELSAT 33e (S2939) - (60.0 E.L.)

SPA Remotes - JCSAT 5A - (132 E.L.)

SPA Remotes - JCSAT-2B - (154 E.L.)

SPA Remotes - NSS-6 - (95 E.L)

SPA Remotes - OTHER -

SPA Remotes - PERMITTED LIST - ()

SPA Remotes - SES-12 (M192103) - (95 E.L.)

SPA Remotes - SES-14 (S2974) - (47.5 W.L.)

- SPA Remotes - SES-15 (S2951) - (129.15 W.L.)
- SPA Remotes - SUPERBIRD C2 (S2639) - (144 E.L.)
- SPA Remotes - TELSTAR 11N (S2357) - (37.5 W.L.)
- SPA Remotes - TELSTAR 12 V (S2933) - (15 W.L.)
- SPA Remotes - Yamal 300K - (177 W.L.)
- SPA Remotes - Yamal 401 - (90 E.L.)
- TECOM Remotes - ANIK G1 - (107.3 W.L.)
- TECOM Remotes - ESTRELA DO SUL 2 - (63 W.L.)
- TECOM Remotes - EUTELSAT115WB(S2938) - (114.9 W.L.)
- TECOM Remotes - EUTELSAT172B(S3021) - (172 E.L.)
- TECOM Remotes - GALAXY 16 (S2687) - (99 W.L.)
- TECOM Remotes - GE-23 - (188 W.L.)
- TECOM Remotes - INTELSAT 21 (S2863) - (58.0 W.L.)
- TECOM Remotes - INTELSAT 29e (S2913) - (50.0 W.L.)
- TECOM Remotes - PERMITTED LIST - ()
- TECOM Remotes - SES-15 (S2951) - (129.15 W.L.)
- TECOM Remotes - TELSTAR 11N (S2357) - (37.5 W.L.)
- TECOM Remotes - Yamal 300K - (177 W.L.)

**SES-MOD-20180629-01929**     E E100061     Mountain Rural Telephone Cooperative Corporation

Application for Modification

**Class of Station:**     Fixed Earth Stations

**Nature of Service:**     Fixed Satellite Service

Mountain Rural Telephone Cooperative Corporation, Inc. requests modification of its fixed earth station in West Liberty, KY to add antennas and update the site address. This station will continue to communicate with Permitted List satellites in the 3700-4200 MHz (space-to-Earth) frequency band.

SITE ID:             1

LOCATION:           405 S. MAIN ST., MORGAN, WEST LIBERTY, KY

37 ° 53 ' 11.50 " N LAT.

83 ° 15 ' 53.90 " W LONG.

ANTENNA ID:    A1	4.5 meters	SUPERIOR SATELLITE	4.5M.
3700.0000 - 4200.0000 MHz		36M0G7W	DIGITAL VIDEO, AUDIO, AND DATA
3700.0000 - 4200.0000 MHz		36M0F8W	ANALOG VIDEO WITH ASSOCIATED AUDIO SUBCARRIERS

ANTENNA ID:	A2	3.8 meters	PATRIOT	PRT-380AZ
	3700.0000 - 4200.0000 MHz		36M0G7W	NULL
ANTENNA ID:	A3	3.7 meters	PRODELIN	3.7M. FIXED
	3700.0000 - 4200.0000 MHz		36M0G7W	NULL
ANTENNA ID:	A4	3 meters	UNKNOWN	UNKNOWN
	3700.0000 - 4200.0000 MHz		36M0G7W	NULL

**Points of Communication:**

1 - PERMITTED LIST - ()

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**SES-MOD-20180925-03914** E E871088 Comcast of New Castle County, LLC

Application for Modification

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

Comcast of New Castle County, LLC., requests modification of its fixed earth station in Wilmington, DE to update antenna make/models and coordinates. This station will continue to communicate with Permitted List satellites in the 3700-4200 MHz (space-to-Earth) frequency band.

SITE ID: 1

LOCATION: 2215 N. DUPONT HWY., NEW CASTLE, WILMINGTON, DE  
 39 ° 42 ' 13.30 " N LAT. 75 ° 34 ' 20.50 " W LONG.

ANTENNA ID:	5M.	5 meters	COMTECH ANTENNA SYSTEMS	5 METER CF
	3700.0000 - 4200.0000 MHz		36M0G7W	DIGITAL VIDEO CARRIER
ANTENNA ID:	3.8M. PAT	3.8 meters	PATRIOT	3.8 METER
	3700.0000 - 4200.0000 MHz		36M0G7W	DIGITAL VIDEO CARRIER
ANTENNA ID:	3.8M. COM	3.8 meters	COMTECH ANTENNA SYSTEMS	3.8 METER PF
	3700.0000 - 4200.0000 MHz		36M0G7W	DIGITAL VIDEO CARRIER

**Points of Communication:**

1 - PERMITTED LIST - ()

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**SES-MOD-20180927-02877** E E980162 SES Government Solutions, Inc.

Application for Modification

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

SES Government Solutions, Inc. requests modification of its fixed earth station in Fairbanks, AK to update the site coordinates. This station will continue to communicate with Permitted List satellites in the 6173-6425 MHz, 5946-6102 MHz and 5925-6425 MHz (Earth-to-space) and 3700-4200 MHz (space-to-Earth) frequency bands.

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SITE ID: 1  
LOCATION: 1300 EISELE ROAD, N. STAR BOROUGH, FAIRBANKS, AK  
64 ° 58 ' 24.90 " N LAT. 147 ° 30 ' 57.20 " W LONG.

ANTENNA ID:	1	9 meters	VERTEX	9KPC	
	6173.0000 - 6425.0000 MHz		2M15G7D	67.60 dBW	ANGLE-MODULATED DIGITAL DATA
	5946.0000 - 6102.0000 MHz		2M15G7D	67.60 dBW	ANGLE-MODULATED DIGITAL DATA
	3700.0000 - 4200.0000 MHz		2M15G7D		ANGLE-MODULATED DIGITAL DATA
ANTENNA ID:	2	11 meters	VERTEX	11KPC	
	5925.0000 - 6425.0000 MHz		27M0G7W	74.90 dBW	PHASE MODULATED DIGITAL CARRIER
	3700.0000 - 4200.0000 MHz		27M0G7W		PHASE MODULATED DIGITAL CARRIER

**Points of Communication:**

1 - PERMITTED LIST - ()

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**SES-MOD-20181015-03663** E E060244 L3 IEC  
Application for Modification  
**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

L3 IEC requests modification of its fixed earth station in Ventura, CA to update the coordinates, to add and change emission designators for Antenna ID 3, and to communicate with Permitted List satellites in the 14.0-14.5 GHz (Earth-to-space) and 11.7-12.2 GHz (space-to-Earth) frequency bands.

SITE ID: 1  
LOCATION: 531 I Avenue Building 531, VENTURA, CA  
34 ° 5 ' 53.34 " N LAT. 119 ° 6 ' 48.02 " W LONG.

ANTENNA ID:	2	2.4 meters	Patriot	TX-FCC240KUS	
	14000.0000 - 14500.0000 MHz		65K1G7D	42.29 dBW	QPSK - Digital Data; E48 data obtained using SATMASTER PRO; See attachment for E49 calculation
	14000.0000 - 14500.0000 MHz		195KG7D	47.06 dBW	QPSK - Digital Data; E48 data obtained using SATMASTER PRO; See attachment for E49 calculation
	14000.0000 - 14500.0000 MHz		521KG7D	51.32 dBW	QPSK - Digital Data; E48 data obtained using SATMASTER PRO; See attachment for E49 calculation



	14000.0000 - 14500.0000 MHz	781KG1F	53.08 dBW	QPSK - Composite Video feed; E48 data obtained using SATMASTER PRO; See attachment for E49 calculation
	11700.0000 - 12200.0000 MHz	65K1G7D	0.00 dBW	QPSK - Digital Data
	11700.0000 - 12200.0000 MHz	195KG7D	0.00 dBW	QPSK - Digital Data
	11700.0000 - 12200.0000 MHz	521KG7D	0.00 dBW	QPSK - Digital Data
	11700.0000 - 12200.0000 MHz	781KG1F	0.00 dBW	QPSK - Composite Video feed
ANTENNA ID:	1	2.4 meters	Patriot	TX-FCC240KUS
	14000.0000 - 14500.0000 MHz	781KG1F	53.08 dBW	QPSK - Composite Video feed; E48 data obtained using SATMASTER PRO; See attachment for E49 calculation
	14000.0000 - 14500.0000 MHz	521KG7D	51.32 dBW	QPSK - Digital Data; E48 data obtained using SATMASTER PRO; See attachment for E49 calculation.
	14000.0000 - 14500.0000 MHz	65K1G7D	42.29 dBW	QPSK - Digital Data; E48 data obtained using SATMASTER PRO; See attachment for E49 calculation.
	14000.0000 - 14500.0000 MHz	195KG7D	47.06 dBW	QPSK - Digital Data; E48 data obtained using SATMASTER PRO; See attachment for E49 calculation.
	11700.0000 - 12200.0000 MHz	65K1G7D	0.00 dBW	QPSK - Digital Data
	11700.0000 - 12200.0000 MHz	195KG7D	0.00 dBW	QPSK - Digital Data
	11700.0000 - 12200.0000 MHz	521KG7D	0.00 dBW	QPSK - Digital Data
	11700.0000 - 12200.0000 MHz	781KG1F	0.00 dBW	QPSK - Composite Video feed
ANTENNA ID:	3	2.4 meters	NORSAT INT'L	SIGNALONK1.0
	14000.0000 - 14500.0000 MHz	4M96G7W	61.24 dBW	DIGITAL TRAFFIC WITH VARIOUS DATA RATES, FEC, AND INFORMAITON TYPES
	14000.0000 - 14500.0000 MHz	64K0G7W	47.24 dBW	DIGITAL TRAFFIC WITH VARIOUS DATA RATES, FEC, AND INFORMAITON TYPES
	11700.0000 - 12200.0000 MHz	4M96G7W	0.00 dBW	DIGITAL TRAFFIC WITH VARIOUS DATA RATES, FEC, AND INFORMAITON TYPES
	11700.0000 - 12200.0000 MHz	64K0G7W	0.00 dBW	DIGITAL TRAFFIC WITH VARIOUS DATA RATES, FEC, AND INFORMAITON TYPES

**Points of Communication:**

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1 - PERMITTED LIST - ()

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**SES-MOD-20181015-03666** E E060131 L3 IEC

Application for Modification

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

L3 IEC requests modification of its fixed earth station in Cape Canaveral, FL to update the coordinates, to add and change emission designators for Antenna ID 1, and to communicate with Permitted List satellites in the 14.0-14.5 GHz (Earth-to-space) and 11.7-12.2 GHz (space-to-Earth) frequency bands.

SITE ID: 1

LOCATION: 1062 Pier Road, Brevard, Cape Canaveral, FL

28 ° 26 ' 2.07 " N LAT.

80 ° 35 ' 5.12 " W LONG.

ANTENNA ID:	1	2.4 meters	Patriot	TXFCC240KUS	
	14000.0000 - 14500.0000 MHz		4M96G7W	61.64 dBW	DIGITAL TRAFFIC, VARIOUS DATA RATES, VARIOUS FEC, VARIOUS INFORMATION TYPES
	14000.0000 - 14500.0000 MHz		64K0G7W	47.60 dBW	DIGITAL TRAFFIC, VARIOUS DATA RATES, VARIOUS FEC, VARIOUS INFORMATION TYPES
	11700.0000 - 12200.0000 MHz		4M96G7W		DIGITAL TRAFFIC, VARIOUS DATA RATES, VARIOUS FEC, VARIOUS INFORMATION TYPES
	11700.0000 - 12200.0000 MHz		64K0G7W		DIGITAL TRAFFIC, VARIOUS DATA RATES, VARIOUS FEC, VARIOUS INFORMATION TYPES

**Points of Communication:**

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1 - PERMITTED LIST - ()

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**SES-MOD-20181015-03681** E E020160 L3 IEC

Application for Modification

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Earth Stations on-board Vessels, Fixed Satellite Service

L3 IEC requests modification of its earth station in Cape Canaveral, FL to update the coordinates for Site ID USNS WATERS; and to add and change emission designators for Antenna IDs ANT-STARB and ANT-PORT. This station will continue to operate with Permitted List satellites in the 11.7-12.2 GHz (space-to-Earth) and 14.0-14.5 GHz (Earth-to-space) frequency bands.

SITE ID: LASS

LOCATION: #6 POSEIDON PIER, BREVARD, CAPE CANAVERAL, FL

ANTENNA ID:	8297	2 meters	SEA TEL	8297/TR	
	14000.0000 - 14500.0000 MHz		195KG7D	48.02 dBW	QPSK - DIGITAL DATA
	14000.0000 - 14500.0000 MHz		521KG7D	52.28 dBW	QPSK - DIGITAL DATA

14000.0000 - 14500.0000 MHz	65K1G7D	43.25 dBW	QPSK - DIGITAL DATA
14000.0000 - 14500.0000 MHz	781KG1F	54.02 dBW	QPSK - COMPOSITE VIDEO FEED
11700.0000 - 12200.0000 MHz	195KG7D		QPSK - DIGITAL DATA
11700.0000 - 12200.0000 MHz	521KG7D		QPSK - DIGITAL DATA
11700.0000 - 12200.0000 MHz	65K1G7D		QPSK - DIGITAL DATA
11700.0000 - 12200.0000 MHz	781KG1F		QPSK - COMPOSITE VIDEO FEED
ANTENNA ID: 9997	2.4 meters	SEA TEL	9997/TR
14000.0000 - 14500.0000 MHz	195KG7D	48.02 dBW	QPSK - DIGITAL DATA
14000.0000 - 14500.0000 MHz	521KG7D	52.28 dBW	QPSK - DIGITAL DATA
14000.0000 - 14500.0000 MHz	65K1G7D	43.24 dBW	QPSK - DIGITAL DATA
14000.0000 - 14500.0000 MHz	781KG7D	54.04 dBW	QPSK - COMPOSITE VIDEO FEED
11700.0000 - 12200.0000 MHz	195KG7D		QPSK - DIGITAL DATA
11700.0000 - 12200.0000 MHz	521KG7D		QPSK - DIGITAL DATA
11700.0000 - 12200.0000 MHz	65K1G7D		QPSK - DIGITAL DATA
11700.0000 - 12200.0000 MHz	781KG1F		QPSK - COMPOSITE VIDEO FEED
SITE ID: USNS WATERS			
LOCATION: #6 POSEIDON PIER (HUB) 1.5M., BREVARD, CAPE CANAVERAL (AFB), FL			
28 ° 24 ' 28.94 " N LAT.	80 ° 35 ' 20.71 " W LONG.		
ANTENNA ID: ANT-PORT	1.5 meters	COBHAM SEATEL	6009
14000.0000 - 14500.0000 MHz	4M96G7W	61.10 dBW	DIGITAL TRAFFIC, VARIOUS DATA RATES, VARIOUS FEC, VARIOUS INFORMATION TYPES
14000.0000 - 14500.0000 MHz	64K0G7W	43.10 dBW	DIGITAL TRAFFIC, VARIOUS DATA RATES, VARIOUS FEC, VARIOUS INFORMATION TYPES
11700.0000 - 12200.0000 MHz	4M96G7W		DIGITAL TRAFFIC, VARIOUS DATA RATES, VARIOUS FEC, VARIOUS INFORMATION TYPES
11700.0000 - 12200.0000 MHz	64K0G7W		DIGITAL TRAFFIC, VARIOUS DATA RATES, VARIOUS FEC, VARIOUS INFORMATION TYPES
ANTENNA ID: ANT-STARB	1.5 meters	COBHAM SEATEL	6009

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14000.0000 - 14500.0000 MHz	4M96G7W	61.10 dBW	DIGITAL TRAFFIC, VARIOUS DATA RATES, VARIOUS FEC, VARIOUS INFORMATION TYPES
14000.0000 - 14500.0000 MHz	64K0G7W	43.10 dBW	DIGITAL TRAFFIC, VARIOUS DATA RATES, VARIOUS FEC, VARIOUS INFORMATION TYPES
11700.0000 - 12200.0000 MHz	4M96G7W		DIGITAL TRAFFIC, VARIOUS DATA RATES, VARIOUS FEC, VARIOUS INFORMATION TYPES
11700.0000 - 12200.0000 MHz	64K0G7W		DIGITAL TRAFFIC, VARIOUS DATA RATES, VARIOUS FEC, VARIOUS INFORMATION TYPES

**Points of Communication:**

LASS - PERMITTED LIST - ()

USNS WATERS - PERMITTED LIST - ()

**SES-MOD-20181030-03726** E E960387 GCI Communication Corp.

Application for Modification

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

GCI Communication Corp. requests modification of its fixed earth station in Nome, AK to update the coordinates and increase the western azimuth angle limit in order to continue to service its customers with a replacement satellite. This station will continue to operate with Permitted List satellites in the 3700-4200 MHz (space-to-Earth) and 5925-6425 MHz (Earth-to-space) frequency bands.

SITE ID: 1

LOCATION: NOME, AK

64 ° 30 ' 13.49 " N LAT.

165 ° 25 ' 40.37 " W LONG.

ANTENNA ID: 1                      9.15 meters                      SCIENTIFIC-ATLANTA                      8009A

5925.0000 - 6425.0000 MHz	45K0G7W-	61.10 dBW	Phase modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	108MG7W	79.82 dBW	Phase modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	45K0D7W-	61.10 dBW	Phase and amplitude modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	108MD7W	79.82 dBW	Phase and amplitude modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	45K0G7W-		Phase modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	108MG7W		Phase modulated voice, video, and data services.

3700.0000 - 4200.0000 MHz	45K0D7W-		Phase and amplitude modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	108MD7W		Phase and amplitude modulated voice, video, and data services.
ANTENNA ID: 2	7.3 meters	ANDREW	ES73-1
5925.0000 - 6425.0000 MHz	45K0G7W-	59.31 dBW	Phase modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	108MG7W	77.52 dBW	Phase modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	45K0D7W-	59.31 dBW	Phase and amplitude modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	108MD7W	77.52 dBW	Phase and amplitude modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	45K0G7W-		Phase modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	108MG7W		Phase modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	45K0D7W-		Phase and amplitude modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	108MD7W		Phase and amplitude modulated voice, video, and data services.

**Points of Communication:**

1 - PERMITTED LIST - ()

**SES-MOD-20181030-03737** E E140073 GCI Communication Corp.

Application for Modification

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

GCI Communication Corp. requests modification of its fixed earth station in Sitka, AK to update the coordinates and increase the western azimuth angle limit in order to continue to service its customers with a replacement satellite. This station will continue to operate with Permitted List satellites in the 3700-4200 MHz (space-to-Earth) and 5925-6425 MHz (Earth-to-space) frequency bands.

SITE ID: 1

LOCATION: SITKA, Sitka, AK  
57 ° 3 ' 1.70 " N LAT.

135 ° 18 ' 32.30 " W LONG.

ANTENNA ID: 1 9.1 meters Andrew ESA91.46A

5925.0000 - 6425.0000 MHz 45K0G7W- 61.71 dBW Phase modulated voice, video, and data services

5925.0000 - 6425.0000 MHz	108MG7W	79.92 dBW	Phase modulated voice, video, and data services
5925.0000 - 6425.0000 MHz	45K0D7W-	61.71 dBW	Phase and amplitude modulated voice, video, and data services
5925.0000 - 6425.0000 MHz	108MD7W	79.92 dBW	Phase and amplitude modulated voice, video, and data services
3700.0000 - 4200.0000 MHz	45K0G7W-		Phase modulated voice, video, and data services
3700.0000 - 4200.0000 MHz	108MG7W		Phase modulated voice, video, and data services
3700.0000 - 4200.0000 MHz	45K0D7W-		Phase and amplitude modulated voice, video, and data services
3700.0000 - 4200.0000 MHz	108MD7W		Phase and amplitude modulated voice, video, and data services

**Points of Communication:**

1 - PERMITTED LIST - ()

**SES-MOD-20181030-03739** E E960427 GCI Communication Corp.

Application for Modification

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

GCI Communication Corp. requests modification of its fixed earth station in Perryville, AK to update the coordinates and increase the western azimuth angle limit in order to continue to service its customers with a replacement satellite. This station will continue to operate with Permitted List satellites in the 3700-4200 MHz (space-to-Earth) and 5925-6425 MHz (Earth-to-space) frequency bands.

**SITE ID:** 1

**LOCATION:** PERRYVILLE, AK

55 ° 54 ' 37.37 " N LAT.

159 ° 8 ' 40.53 " W LONG.

**ANTENNA ID:** 1 3.6 meters VIASAT/SCIENTIFIC-ATLANTA 8136

5925.0000 - 6425.0000 MHz	108MG7W	71.92 dBW	Phase modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	108MG7W		Phase modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	45K0G7W-	53.71 dBW	Phase modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	45K0D7W-	53.71 dBW	Phase and amplitude modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	108MD7W	71.92 dBW	Phase and amplitude modulated voice, video, and data services.

3700.0000 - 4200.0000 MHz	45K0G7W-	Phase modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	45K0D7W-	Phase and amplitude modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	108MD7W	Phase and amplitude modulated voice, video, and data services.

**Points of Communication:**

1 - PERMITTED LIST - ()

**SES-MOD-20181030-03742** E E960424 GCI Communication Corp.

Application for Modification

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

GCI Communication Corp. requests modification of its fixed earth station in King Cove, AK to update the coordinates and increase the western azimuth angle limit in order to continue to service its customers with a replacement satellite. This station will continue to operate with Permitted List satellites in the 3700-4200 MHz (space-to-Earth) and 5925-6425 MHz (Earth-to-space) frequency bands.

SITE ID: 1

LOCATION: KING COVE, AK

55 ° 3 ' 39.11 " N LAT.

162 ° 18 ' 52.06 " W LONG.

ANTENNA ID: 1 3.6 meters VISAT/SCIENTIFIC-ATLANTA 8136

5925.0000 - 6425.0000 MHz	45K0G7W-	53.71 dBW	Phase modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	108MG7W	71.92 dBW	Phase modulated voice, video, and data services
5925.0000 - 6425.0000 MHz	45K0D7W-	53.71 dBW	Phase and amplitude modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	108MD7W	71.92 dBW	Phase and amplitude modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	45K0G7W-		Phase modulated voice, video, and data services
3700.0000 - 4200.0000 MHz	108MG7W		Phase modulated voice, video, and data services
3700.0000 - 4200.0000 MHz	45K0D7W-		Phase and amplitude modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	108MD7W		Phase and amplitude modulated voice, video, and data services.

**Points of Communication:**

1 - PERMITTED LIST - ()

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**SES-MOD-20181030-03743** E E960425 GCI Communication Corp.

Application for Modification

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

GCI Communication Corp. requests modification of its fixed earth station in Cold Bay, AK to update the coordinates and increase the western azimuth angle limit in order to continue to service its customers with a replacement satellite. This station will continue to operate with Permitted List satellites in the 3700-4200 MHz (space-to-Earth) and 5925-6425 MHz (Earth-to-space) frequency bands.

SITE ID: 1

LOCATION: COLD BAY, AK

55 ° 12 ' 12.12 " N LAT.

162 ° 42 ' 43.48 " W LONG.

ANTENNA ID:	1	3.6 meters	VIASAT/SCIENTIFIC-ATLANTA	8136
	5925.0000 - 6425.0000 MHz	108MG7W	71.92 dBW	Phase modulated voice, video, and data services
	5925.0000 - 6425.0000 MHz	108MD7W	71.92 dBW	Phase and amplitude modulated voice, video, and data services.
	3700.0000 - 4200.0000 MHz	45K0G7W-		Phase modulated voice, video, and data services
	3700.0000 - 4200.0000 MHz	108MG7W		Phase modulated voice, video, and data services
	3700.0000 - 4200.0000 MHz	108MD7W		Phase and amplitude modulated voice, video, and data services.
	5925.0000 - 6425.0000 MHz	45K0G7W-	53.71 dBW	Phase modulated voice, video, and data services
	5925.0000 - 6425.0000 MHz	45K0D7W-	53.71 dBW	Phase and amplitude modulated voice, video, and data services.
	3700.0000 - 4200.0000 MHz	45K0D7W-		Phase and amplitude modulated voice, video, and data services.

**Points of Communication:**

1 - PERMITTED LIST - ()

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**SES-MOD-20181030-03756** E E960434 GCI Communication Corp.

Application for Modification

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

GCI Communication Corp. requests modification of its fixed earth station in Ekuk/Clarks Point, AK to update the coordinates and increase the western azimuth angle limit in order to continue to service its customers with a replacement satellite. This station will continue to operate with Permitted List satellites in the 3700-4200 MHz (space-to-Earth) and 5925-6425 MHz (Earth-to-space) frequency bands.

SITE ID: 1

LOCATION: EKUK/CLARKS POINT, AK

58 ° 50 ' 3.76 " N LAT.

158 ° 32 ' 42.87 " W LONG.



ANTENNA ID:	1	3.6 meters	VIASAT/SCIENTIFIC-ATLANTA	8136
	5925.0000 - 6425.0000 MHz	45K0G7W-	53.71 dBW	PHASE MODULATED VOICE, VIDEO, AND DATA SERVICES.
	5925.0000 - 6425.0000 MHz	108MG7W	71.92 dBW	PHASE MODULATED VOICE, VIDEO, AND DATA SERVICES.
	5925.0000 - 6425.0000 MHz	45K0D7W-	53.71 dBW	PHASE AND AMPLITUDE MODULATED VOICE, VIDEO, AND DATA SERVICES.
	5925.0000 - 6425.0000 MHz	108MD7W	71.92 dBW	PHASE AND AMPLITUDE MODULATED VOICE, VIDEO, AND DATA SERVICES.
	3700.0000 - 4200.0000 MHz	45K0G7W-		PHASE MODULATED VOICE, VIDEO, AND DATA SERVICES.
	3700.0000 - 4200.0000 MHz	108MG7W		PHASE MODULATED VOICE, VIDEO, AND DATA SERVICES.
	3700.0000 - 4200.0000 MHz	45K0D7W-		PHASE AND AMPLITUDE MODULATED VOICE, VIDEO, AND DATA SERVICES.
	3700.0000 - 4200.0000 MHz	108MD7W		PHASE AND AMPLITUDE MODULATED VOICE, VIDEO, AND DATA SERVICES.

**Points of Communication:**

1 - PERMITTED LIST - ()

**SES-MOD-20181030-03757** E E960445 GCI Communication Corp.

Application for Modification

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

GCI Communication Corp. requests modification of its fixed earth station in Golovin, AK to update the coordinates and increase the western azimuth angle limit in order to continue to service its customers with a replacement satellite. This station will continue to operate with Permitted List satellites in the 3700-4200 MHz (space-to-Earth) and 5925-6425 MHz (Earth-to-space) frequency bands.

SITE ID: 1

LOCATION: GOLOVIN, AK

64 ° 32 ' 39.12 " N LAT.

163 ° 21 ' 2.33 " W LONG.

ANTENNA ID:	1	3.6 meters	VIASAT/SCIENTIFIC-ATLANTA	8136
	5925.0000 - 6425.0000 MHz	45K0G7W-	53.71 dBW	PHASE MODULATED VOICE, VIDEO, AND DATA SERVICES
	5925.0000 - 6425.0000 MHz	108MG7W	71.92 dBW	PHASE MODULATED VOICE, VIDEO, AND DATA SERVICES

5925.0000 - 6425.0000 MHz	45K0D7W	53.71 dBW	PHASE AND AMPLITUDE MODULATED VOICES, VIDEO AND DATA SERVICES
5925.0000 - 6425.0000 MHz	108MD7W	71.92 dBW	PHASE AND AMPLITUDE MODULATED VOICES, VIDEO AND DATA SERVICES
3700.0000 - 4200.0000 MHz	45K0G7W-		PHASE MODULATED VOICE, VIDEO, AND DATA SERVICES
3700.0000 - 4200.0000 MHz	108MG7W		PHASE MODULATED VOICE, VIDEO, AND DATA SERVICES
3700.0000 - 4200.0000 MHz	45K0D7W-		PHASE AND AMPLITUDE MODULATED VOICES, VIDEO AND DATA SERVICES
3700.0000 - 4200.0000 MHz	108MD7W		PHASE AND AMPLITUDE MODULATED VOICES, VIDEO AND DATA SERVICES

**Points of Communication:**

1 - PERMITTED LIST - ()

**SES-MOD-20181030-03758** E E960431 GCI Communication Corp.

Application for Modification

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

GCI Communication Corp. requests modification of its fixed earth station in Chignik Lagoon, AK to update the coordinates and increase the western azimuth angle limit in order to continue to service its customers with a replacement satellite. This station will continue to operate with Permitted List satellites in the 3700-4200 MHz (space-to-Earth) and 5925-6425 MHz (Earth-to-space) frequency bands.

**SITE ID:** 1

**LOCATION:** CHIGNIK LAGOON, AK

56 ° 18 ' 36.20 " N LAT.

158 ° 32 ' 20.59 " W LONG.

<b>ANTENNA ID:</b> 1	3.6 meters	VIASAT SCIENTIFIC-ATLANTA	8136
5925.0000 - 6425.0000 MHz	108MG7W	71.92 dBW	Phase modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	45K0G7W-		Phase modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	45K0D7W-	53.71 dBW	Phase and amplitude modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	108MD7W	71.92 dBW	Phase and amplitude modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	45K0D7W-		Phase and amplitude modulated voice, video, and data services.

3700.0000 - 4200.0000 MHz	108MD7W		Phase and amplitude modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	45K0G7W-	53.71 dBW	Phase modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	108MG7W		Phase modulated voice, video, and data services.

**Points of Communication:**

1 - PERMITTED LIST - ()

**SES-MOD-20181030-03759** E E960429 GCI Communication Corp.

Application for Modification

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

GCI Communication Corp. requests modification of its fixed earth station in Chignik Lake, AK to update the coordinates and increase the western azimuth angle limit in order to continue to service its customers with a replacement satellite. This station will continue to operate with Permitted List satellites in the 3700-4200 MHz (space-to-Earth) and 5925-6425 MHz (Earth-to-space) frequency bands.

SITE ID: 1

LOCATION: CHIGNIK LAKE, AK  
56 ° 15 ' 18.15 " N LAT.

158 ° 46 ' 1.11 " W LONG.

ANTENNA ID: 1	3.6 meters	VIASAT/SCIENTIFIC- ATLANTA	8136
5925.0000 - 6425.0000 MHz	108MG7W	71.92 dBW	Phase modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	108MG7W		Phase modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	45K0G7W-	53.71 dBW	Phase modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	45K0D7W	53.71 dBW	Phase and amplitude modulated voice, video, and data services.
5925.0000 - 6425.0000 MHz	108MD7W	71.92 dBW	Phase and amplitude modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	45K0G7W-		Phase modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	45K0D7W-		Phase and amplitude modulated voice, video, and data services.
3700.0000 - 4200.0000 MHz	108MD7W		Phase and amplitude modulated voice, video, and data services.

**Points of Communication:**

1 - PERMITTED LIST - ()

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**SES-REG-20180903-04163** E E190470 Overdrive Radio LLC

Registration

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

SITE ID: 1

LOCATION: 1016 W University Ave. (OTW Studio), Coconino, Flagstaff, AZ  
35 ° 11 ' 4.60 " N LAT. 111 ° 40 ' 2.10 " W LONG.

ANTENNA ID: Main Dish 3.7 meters Dawnco. D37F48-4PC-5.5  
3700.0000 - 4200.0000 MHz 30M0G7W 0.00 dBW Analog video with associated subcarriers.

**Points of Communication:**

1 - PERMITTED LIST - ()

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**SES-REG-20180903-04164** E E190471 WaveDivision IV, LLC

Registration

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

SITE ID: 1

LOCATION: 4519 SE Mile Hill Dr., Kitsap, Port Orchard, WA  
47 ° 32 ' 4.00 " N LAT. 127 ° 35 ' 32.00 " W LONG.

ANTENNA ID: SA-Unk 4.5 meters Scientific Atlanta Unknown  
3700.0000 - 4200.0000 MHz 36M0F8F Analog Video w/Associated Subcarriers  
3700.0000 - 4200.0000 MHz 36M0G7F Video Compressed

**Points of Communication:**

1 - PERMITTED LIST - ()

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**SES-REG-20180907-04087** E E190393 CCI SYSTEMS, INC.

Registration

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

SITE ID: 1

LOCATION: 2178 Carriage Road, Mackinac Island, MI  
45 ° 51 ' 34.92 " N LAT. 84 ° 36 ' 55.80 " W LONG.

ANTENNA ID: 3.6M. 3.6 meters Viking satcom SMALL  
3700.0000 - 4200.0000 MHz 36M0G7W Video

**Points of Communication:**

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1 - PERMITTED LIST - ()

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**SES-REG-20180911-04312** E E190631 Consolidated Communications Enterprise Services, Inc.

Registration

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

SITE ID: 1

LOCATION: 5411 Luce Avenue McClellan, USA, Sacramento, CA  
46 ° 56 ' 25.99 " N LAT. 122 ° 36 ' 19.37 " W LONG.

ANTENNA ID: 1 5.2 meters ATCI Simulsat 5

3700.0000 - 4200.0000 MHz 36M0G7W Analog and digital video

**Points of Communication:**

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1 - PERMITTED LIST - ()

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**SES-REG-20180911-04313** E E190632 Consolidated Communications Enterprise Services, Inc.

Registration

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

SITE ID: 1

LOCATION: 5411 Luce Avenue McClellan, USA, Sacramento, CA  
40 ° 37 ' 58.55 " N LAT. 79 ° 57 ' 6.11 " W LONG.

ANTENNA ID: 1 4.5 meters ATCI SS5 Simulsat

3700.0000 - 4200.0000 MHz 36M0G7W Analog and digital video

**Points of Communication:**

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1 - PERMITTED LIST - ()

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**SES-REG-20180911-04315** E E190634 Consolidated Communications Enterprise Services, Inc.

Registration

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

SITE ID: 1

LOCATION: 5411 Luce Avenue McClellan, USA, Sacramento, CA  
46 ° 59 ' 5.45 " N LAT. 120 ° 25 ' 4.35 " W LONG.

ANTENNA ID: 1 3.7 meters Prodelin 1374

3700.0000 - 4200.0000 MHz 36M0G7W Analog and digital video

**Points of Communication:**

1 - PERMITTED LIST - ()

**SES-REG-20180912-04318** E E190637 Lake Superior Community Broadcasting Corporation

Registration

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

SITE ID: 1

LOCATION: 1705 Ash St. Ste 5, Ishpeming, MI  
46 ° 30 ' 26.00 " N LAT.

87 ° 39 ' 57.00 " W LONG.

ANTENNA ID:	1	3.8 meters	Patriot	PRT380
	3700.0000 - 4200.0000 MHz		30K0G7W	DVBS-2, QPSK
	3700.0000 - 4200.0000 MHz		100KG7W	DVBS-2, QPSK
	3700.0000 - 4200.0000 MHz		500KG7W	DVBS-2, QPSK
	3700.0000 - 4200.0000 MHz		850KG7W	DVBS-2, QPSK
	3700.0000 - 4200.0000 MHz		1M00G7W	DVBS-2, QPSK
	3700.0000 - 4200.0000 MHz		10M0G7W	DVBS-2, QPSK
	3700.0000 - 4200.0000 MHz		36M0G7W	DVBS-2, QPSK
ANTENNA ID:	2	3.1 meters	Patriot	PRT310
	3700.0000 - 4200.0000 MHz		30K0G7W	DVBS-2, QPSK
	3700.0000 - 4200.0000 MHz		100KG7W	DVBS-2, QPSK
	3700.0000 - 4200.0000 MHz		500KG7W	DVBS-2, QPSK
	3700.0000 - 4200.0000 MHz		850KG7W	DVBS-2, QPSK
	3700.0000 - 4200.0000 MHz		1M00G7W	DVBS-2, QPSK
	3700.0000 - 4200.0000 MHz		10M0G7W	DVBS-2, QPSK
	3700.0000 - 4200.0000 MHz		36M0G7W	DVBS-2, QPSK
ANTENNA ID:	3	3.4 meters	Viking Satcom	VS-340NAV
	3700.0000 - 4200.0000 MHz		30K0G7W	DVBS-2, QPSK
	3700.0000 - 4200.0000 MHz		100KG7W	DVBS-2, QPSK
	3700.0000 - 4200.0000 MHz		500KG7W	DVBS-2, QPSK

3700.0000 - 4200.0000 MHz	850KG7W	DVBS-2, QPSK
3700.0000 - 4200.0000 MHz	1M00G7W	DVBS-2, QPSK
3700.0000 - 4200.0000 MHz	10M0G7W	DVBS-2, QPSK
3700.0000 - 4200.0000 MHz	36M0G7W	DVBS-2, QPSK

**Points of Communication:**

1 - PERMITTED LIST - ()

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**SES-REG-20180925-04088** E E190394 Community First Broadcasting, LLC

Registration

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

SITE ID: Site 3

LOCATION: 128 20th Street SE, Sioux, Sioux Center, IA

43 ° 3 ' 19.00 " N LAT.

96 ° 10 ' 24.60 " W LONG.

ANTENNA ID: Dish 1 3.81 meters Comtech Unknown

3700.0000 - 4200.0000 MHz 36M0G7W Multiplexed Digital

**Points of Communication:**

Site 3 - PERMITTED LIST - ()

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**SES-REG-20180928-04329** E E190653 New Jersey Public Broadcasting Authority

Registration

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

SITE ID: 1

LOCATION: 1647 Arrow Head Drive, Camden, Waterford Works, NJ

39 ° 43 ' 43.70 " N LAT.

74 ° 50 ' 38.70 " W LONG.

ANTENNA ID: Waterford 3.7 meters Mira Light 370

3700.0000 - 4200.0000 MHz 36M0G7W Digital Video

**Points of Communication:**

1 - PERMITTED LIST - ()

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**SES-REG-20181002-03917** E E190230 GCI Communication Corp.

Registration

**Class of Station:** Fixed Earth Stations

**Nature of Service:** Fixed Satellite Service

SITE ID: 1  
 LOCATION: (Rx-Only), Kotzebue, AK  
 66 ° 53 ' 45.00 " N LAT. 162 ° 35 ' 56.14 " W LONG.

ANTENNA ID:	1256	10 meters	Scientific-Atlanta	8112-1
	3700.0000 - 4200.0000 MHz		45K0G7W	Phase modulated voice, video, and data services.
	3700.0000 - 4200.0000 MHz		36M0G7W	Phase modulated voice, video, and data services.
	3700.0000 - 4200.0000 MHz		45K0D7W	Phase and amplitude modulated voice, video, and data services.
	3700.0000 - 4200.0000 MHz		36M0D7W	Phase and amplitude modulated voice, video, and data services.
ANTENNA ID:	1257	5 meters	Anixter	ES40200SD
	3700.0000 - 4200.0000 MHz		45K0G7W	Phase modulated voice, video, and data services.
	3700.0000 - 4200.0000 MHz		36M0G7W	Phase modulated voice, video, and data services.
	3700.0000 - 4200.0000 MHz		45K0D7W	Phase and amplitude modulated voice, video, and data services.
	3700.0000 - 4200.0000 MHz		36M0D7W	Phase and amplitude modulated voice, video, and data services.
ANTENNA ID:	3269	4.5 meters	Scientific-Atlanta	8345
	3700.0000 - 4200.0000 MHz		45K0G7W	Phase modulated voice, video, and data services.
	3700.0000 - 4200.0000 MHz		36M0G7W	Phase modulated voice, video, and data services.
	3700.0000 - 4200.0000 MHz		45K0D7W	Phase and amplitude modulated voice, video, and data services.
	3700.0000 - 4200.0000 MHz		36M0D7W	Phase and amplitude modulated voice, video, and data services.

**Points of Communication:**

1 - PERMITTED LIST - ()

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**SES-REG-20181016-04242** E E190568 Universal Cable Holdings, Inc.  
 Registration  
**Class of Station:** Fixed Earth Stations  
**Nature of Service:** Fixed Satellite Service



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SITE ID: 1  
LOCATION: 16048 BusinessI-40, Wheeler, Shamrock, TX  
35 ° 13 ' 12.78 " N LAT. 100 ° 13 ' 43.93 " W LONG.

ANTENNA ID: 1 3.8 meters COMTECH ANTENNA SYSTEMS 3.8 Meter  
3700.0000 - 4200.0000 MHz 36M0G7W Digital Video Carrier

**Points of Communication:**

1 - PERMITTED LIST - ()

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For more information concerning this Notice, contact the Satellite Division at 418-0719; TTY 1-888-835-5322.