



PUBLIC NOTICE

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

News media information 202-418-0500
Internet: <http://www.fcc.gov> (or <ftp.fcc.gov>)
TTY (202) 418-2555

Report No. SES-01563

Wednesday June 26, 2013

Satellite Communications Services Information

re: Actions Taken

The Commission, by its International Bureau, took the following actions pursuant to delegated authority. The effective dates of the actions are the dates specified.

SES-AFS-20120426-00396 E E060445 HNS License Sub, LLC

Amendment

Granted in Part/ Deferred in Part

Date Effective: 06/20/2013

Class of Station: Other

Nature of Service: Fixed Satellite Service

SITE ID: TR3.5M

LOCATION: 50,000 (3.5m) CONUS, AK, HI, PR, VI

0° 0' 0.00" N LAT.

0° 0' 0.00" W LONG.

| ANTENNA ID: | TR3.5 | 3.5 meters | Andrew | ES35SRT-1 |
|-------------|-----------------------------|------------|-----------|------------------------------------|
| | 29500.0000 - 30000.0000 MHz | 20M9G7W | 75.40 dBW | 16.348 MBPS, PSK, DIGITAL CARRIER |
| | 29500.0000 - 30000.0000 MHz | 2M61G7W | 66.30 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| | 29500.0000 - 30000.0000 MHz | 650KG7W | 60.30 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| | 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| | 29300.0000 - 29500.0000 MHz | 650KG7W | 60.30 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| | 29300.0000 - 29500.0000 MHz | 20M9G7W | 75.40 dBW | 2,048 MBPS, PSK, DIGITAL CARRIER |
| | 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| | 18300.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |

| | | | |
|---|------------|------------------|------------------------------------|
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| SITE ID: TFTR1.2M | | | |
| LOCATION: 1000 (1.2M) CONUS, AK, HI, PR, VI | | | |
| ANTENNA ID: TFTR1.2 | 1.2 meters | AVL TECHNOLOGIES | 1210K |
| 29500.0000 - 30000.0000 MHz | 100KG7W | 42.70 dBW | QPSK, DATA, INROUTE, 64 KSPS |
| 29500.0000 - 30000.0000 MHz | 2M00G7W | 55.90 dBW | QPSK, DATA, INROUTE, 1600 KSPS |
| 29500.0000 - 30000.0000 MHz | 2M61G7W | 55.90 dBW | QPSK, DATA, INROUTE, 2048 KSPS |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | QPSK, DATA, OUTROUTE, 64 KSPS |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | QPSK, DATA, OUTROUTE, 30 MSPS |
| 29300.0000 - 29500.0000 MHz | 100KG7W | 42.70 dBW | QPSK, DATA, INROUTE, 64 KSPS |
| 29300.0000 - 29500.0000 MHz | 2M61G7W | 55.90 dBW | QPSK, DATA, INROUTE, 2048 KSPS |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | QPSK, DATA, OUTROUTE, 64 KSPS |
| 18300.0000 - 19300.0000 MHz | 2M61G7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |

SITE ID: TFTR74CM
LOCATION: 25,000 (74cm) CONUS, AK, HI, PR, VI
0 ° 0 ' 0.00 " N LAT. 0 ° 0 ' 0.00 " W LONG.

| | | | |
|-----------------------------|-------------|-----------|------------------------------------|
| ANTENNA ID: 74CM(TA) | 0.74 meters | Prodelin | HNS1031929 |
| 29500.0000 - 30000.0000 MHz | 650KG7W | 47.00 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 18300.0000 - 18800.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 28350.0000 - 28600.0000 MHz | 650KG7W | 47.00 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 18800.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 28350.0000 - 28600.0000 MHz | 650KG7W | 47.00 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 47.00 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |

| | | | |
|-----------------------------|-------------|-----------|------------------------------------|
| 18800.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| ANTENNA ID: 74CM(TB) | 0.74 meters | Raven | AN8-074R |
| 29500.0000 - 30000.0000 MHz | 650KG7W | 47.00 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ, PSK, DIGITAL CARRIER |
| 18300.0000 - 18800.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 28350.0000 - 28600.0000 MHz | 650KG7W | 45.80 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 45.80 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 18800.0000 MHz | 500MG7W | | 500 MHZ, PSK, DIGITAL CARRIER |
| 28350.0000 - 28600.0000 MHz | 650KG7W | 45.80 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 45.80 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| 18800.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| ANTENNA ID: 74CM(TC) | 0.74 meters | GD SATCOM | AN8-074P |
| 29500.0000 - 30000.0000 MHz | 650KG7W | 47.00 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ, PSK, DIGITAL CARRIER |
| 18300.0000 - 18800.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 28350.0000 - 28600.0000 MHz | 650KG7W | 47.00 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 47.00 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 18800.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 28350.0000 - 28600.0000 MHz | 650KG7W | 47.00 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 47.00 dBW | 512 KBPS, PSK, DIGITAL CARRIER |

| | | |
|-----------------------------|---------|------------------------------------|
| 18300.0000 - 19300.0000 MHz | 100KG7W | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| 18800.0000 - 19300.0000 MHz | 500MG7W | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | 100 KHZ WIDE, PSK, DIGITAL CARRIER |

SITE ID: TFTR98CM
LOCATION: 10,000 (98cm) CONUS, AK, HI, PR, VI
0 ° 0 ' 0.00 " N LAT. 0 ° 0 ' 0.00 " W LONG.

| | | | |
|-----------------------------|-------------|----------------|------------------------------------|
| ANTENNA ID: TFTR98(2) | 0.98 meters | Raven Mfg.Ltd. | AN8-098RAN-098KA |
| 29500.0000 - 30000.0000 MHz | 650KG7W | 49.40 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 29500.0000 - 30000.0000 MHz | 2M61G7W | 53.40 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 49.40 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 2M61G7W | 53.40 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| ANTENNA ID: TFTR98CM | 0.98 meters | GD SATCOM | AN8-098P |
| 29500.0000 - 30000.0000 MHz | 650KG7W | 49.40 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 29500.0000 - 30000.0000 MHz | 2M61G7W | 53.40 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 49.40 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 2M61G7W | 53.40 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |

| | | | | |
|-----------------------------|-------------|------------------|--|------------------------------------|
| 19700.0000 - 20200.0000 MHz | 100KG7W | | | 100 MHZ WIDE, PSK, DIGITAL CARRIER |
| ANTENNA ID: TFTR98(3) | 0.98 meters | AVL TECHNOLOGIES | | 1010K |
| 29500.0000 - 30000.0000 MHz | 500MG7W | 41.20 dBW | | QPSK, DATA, INROUTE, 64 KSPS |
| 29500.0000 - 30000.0000 MHz | 1M48G7W | 52.90 dBW | | QPSK, DATA, INROUTE, 1100 KSPS |
| 29500.0000 - 30000.0000 MHz | 2M61G7W | 52.90 dBW | | QPSK, DATA, INROUTE, 2048 KSPS |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | | QPSK, DATA, OUTROUTE, 64 KSPS |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | | QPSK, DATA, OUTROUTE, 30 MSPS |
| 29300.0000 - 29500.0000 MHz | 2M61G7W | 52.90 dBW | | QPSK, DATA, INROUTE, 204K KSPS |
| 29300.0000 - 29500.0000 MHz | 500MG7W | 41.20 dBW | | QPSK, DATA, INROUTE, 64 KSPS |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | | QPSK, DATA, OUTROUTE, 64 KSPS |
| 18300.0000 - 19300.0000 MHz | 500MG7W | | | QPSK, DATA, OUTROUTE, 30 MSPS |

SITE ID: TR98CM
LOCATION: 250,000 (98cm) CONUS, AK, HI, PR, VI
0 ° 0 ' 0.00 " N LAT. 0 ° 0 ' 0.00 " W LONG.

| | | | | |
|-----------------------------|-------------|-----------------|--|------------------------------------|
| ANTENNA ID: TR98CM(1) | 0.98 meters | GD SATCOM | | AN8-098P |
| 29500.0000 - 30000.0000 MHz | 650KG7W | 49.40 dBW | | 512 KBPS, PSK, DIGITAL CARRIER |
| 29500.0000 - 30000.0000 MHz | 2M61G7W | 53.40 dBW | | 2.048 MBPS, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 2M61G7W | 53.40 dBW | | 2.048 MBPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 49.40 dBW | | 512 KBPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 500MG7W | | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| ANTENNA ID: TR98CM(2) | 0.98 meters | Raven Mfg. Ltd. | | AN8-098R |
| 29500.0000 - 30000.0000 MHz | 650KG7W | 49.40 dBW | | 512 KBPS, PSK, DIGITAL CARRIER |

| | | | |
|-----------------------------|---------|-----------|------------------------------------|
| 29500.0000 - 30000.0000 MHz | 2M61G7W | 53.40 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 45.80 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 49.40 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 2M61G7W | 53.40 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |

SITE ID: TR74CM

LOCATION: 2,000,000 (74cm) CONUS, AK, HI, PR, VI
0 ° 0 ' 0.00 " N LAT.

0 ° 0 ' 0.00 " W LONG.

| | | | |
|-----------------------------|-------------|-----------|------------------------------------|
| ANTENNA ID: 74CM(FA) | 0.74 meters | GD SATCOM | AN8-074P |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ, PSK, DIGITAL CARRIER |
| 18300.0000 - 18800.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 28350.0000 - 28600.0000 MHz | 650KG7W | 45.80 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| 18800.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |

| | | | |
|-----------------------------|-------------|-----------|--------------------------------|
| ANTENNA ID: 74CM(FB) | 0.74 meters | Prodelin | HNS1031929 |
| 29300.0000 - 30000.0000 MHz | 650KG7W | 45.80 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ, PSK, DIGITAL CARRIER |

| | | | | |
|-------------|-----------------------------|-------------|-----------|-------------------------------------|
| ANTENNA ID: | 74CM(FC) | 0.74 meters | Raven | AN8-074R |
| | 29300.0000 - 30000.0000 MHz | 650KG7W | 47.00 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| | 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PASK, DIGITAL CARRIER |
| | 18300.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| | 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| | 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |

SITE ID: TR1.8M
LOCATION: 50,000 (1.8m) CONUS, AK, HI, PR, VI
0 ° 0 ' 0.00 " N LAT. 0 ° 0 ' 0.00 " W LONG.

| | | | | |
|-------------|-----------------------------|------------|-----------|------------------------------------|
| ANTENNA ID: | TR1.8 | 1.8 meters | Prodelin | 3180-131 |
| | 29500.0000 - 30000.0000 MHz | 20M9G7W | 69.80 dBW | 16.348 MBPS, PSK, DIGITAL CARRIER |
| | 29500.0000 - 30000.0000 MHz | 2M61G7W | 60.70 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| | 29500.0000 - 30000.0000 MHz | 650KG7W | 54.70 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| | 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| | 29300.0000 - 29500.0000 MHz | 650KG7W | 54.70 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| | 29300.0000 - 29500.0000 MHz | 20M9G7W | 69.80 dBW | 16.348 MBPS, PSK, DIGITAL CARRIER |
| | 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| | 18300.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| | 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |

SITE ID: TR1.2M
LOCATION: 100,000 (1.2m) CONUS, AK, HI, PR, VI
0 ° 0 ' 0.00 " N LAT. 0 ° 0 ' 0.00 " W LONG.

| | | | | |
|-------------|-----------------------------|------------|-----------|----------------------------------|
| ANTENNA ID: | TR1.2 | 1.2 meters | Prodelin | 3120-131 |
| | 29500.0000 - 30000.0000 MHz | 2M61G7W | 57.20 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |

| | | | |
|-----------------------------|---------|-----------|------------------------------------|
| 29500.0000 - 30000.0000 MHz | 650KG7W | 51.20 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 51.20 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 2M61G7W | 57.20 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |

SITE ID: TFTR98CM
LOCATION: 10,000 (1.0m) CONUS, AK, HI, PR, VI

SITE ID: TR69CM
LOCATION: 1,000,000 (69CM)

| | | | |
|-----------------------------|-------------|-----------|--|
| ANTENNA ID: 69CM | 0.69 meters | RAVEN | HNS-AN8-069R |
| 29300.0000 - 29500.0000 MHz | 100KG7W | 38.50 dBW | M-ARY PHASE SHIFT KEYING DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 2M00G7W | 46.80 dBW | M-ARY PHASE SHIFT KEYING DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 670KG7W | 46.80 dBW | M-ARY PHASE SHIFT KEYING DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | M-ARY PHASE SHIFT KEYING DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 500MG7W | | M-ARY PHASE SHIFT KEYING DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | M-ARY PHASE SHIFT KEYING DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | M-ARY PHASE SHIFT KEYING DIGITAL CARRIER |

Points of Communication:

- TFTR1.2M - AMC-15 - (105 W.L.)
- TFTR1.2M - AMC-16 - (85 W.L.)
- TFTR1.2M - ECHOSTAR -9 - (121 W.L.)

TFTR1.2M - Echostar XVII(S2866) - (107.1 W.L.)

TFTR1.2M - SPACEWAY 3 - (94.95 W.L.)

TFTR74CM - AMC-15 - (105 W.L.)

TFTR74CM - AMC-16 - (85 W.L.)

TFTR74CM - DIRECTV 10 - (102.8 W.L.)

TFTR74CM - DIRECTV 11 - (99.2 W.L.)

TFTR74CM - ECHOSTAR -9 - (121 W.L.)

TFTR74CM - Echostar XVII(S2866) - (107.1 W.L.)

TFTR74CM - SPACEWAY 1 - (103 W.L.)

TFTR74CM - SPACEWAY 2 - (99 W.L.)

TFTR74CM - SPACEWAY 3 - (94.95 W.L.)

TFTR98CM - AMC-15 - (105 W.L.)

TFTR98CM - AMC-16 - (85 W.L.)

TFTR98CM - ECHOSTAR -9 - (121 W.L.)

TFTR98CM - Echostar XVII(S2866) - (107.1 W.L.)

TFTR98CM - SPACEWAY 1 - (103 W.L.)

TFTR98CM - SPACEWAY 2 - (99 W.L.)

TFTR98CM - SPACEWAY 3 - (94.95 W.L.)

TR1.2M - AMC-15 - (105 W.L.)

TR1.2M - AMC-16 - (85 W.L.)

TR1.2M - ECHOSTAR -9 - (121 W.L.)

TR1.2M - Echostar XVII(S2866) - (107.1 W.L.)

TR1.2M - SPACEWAY 1 - (103 W.L.)

TR1.2M - SPACEWAY 2 - (99 W.L.)

TR1.2M - SPACEWAY 3 - (94.95 W.L.)

TR1.8M - AMC-15 - (105 W.L.)

TR1.8M - AMC-16 - (85 W.L.)

TR1.8M - ECHOSTAR -9 - (121 W.L.)

TR1.8M - Echostar XVII(S2866) - (107.1 W.L.)

TR1.8M - SPACEWAY 1 - (103 W.L.)

TR1.8M - SPACEWAY 2 - (99 W.L.)

TR1.8M - SPACEWAY 3 - (94.95 W.L.)

TR3.5M - AMC-15 - (105 W.L.)

TR3.5M - AMC-16 - (85 W.L.)

TR3.5M - EHOSTAR -9 - (121 W.L.)

TR3.5M - Echostar XVII(S2866) - (107.1 W.L.)

TR3.5M - SPACEWAY 1 - (103 W.L.)

TR3.5M - SPACEWAY 2 - (99 W.L.)

TR3.5M - SPACEWAY 3 - (94.95 W.L.)

TR69CM - AMC-15 - (105 W.L.)

TR69CM - AMC-16 - (85 W.L.)

TR69CM - EHOSTAR -9 - (121 W.L.)

TR69CM - Echostar XVII(S2866) - (107.1 W.L.)

TR69CM - SPACEWAY 1 - (103 W.L.)

TR69CM - SPACEWAY 2 - (99 W.L.)

TR69CM - SPACEWAY 3 - (94.95 W.L.)

TR74CM - AMC-15 - (105 W.L.)

TR74CM - AMC-16 - (85 W.L.)

TR74CM - DIRECTV 10 - (102.8 W.L.)

TR74CM - DIRECTV 11 - (99.2 W.L.)

TR74CM - EHOSTAR -9 - (121 W.L.)

TR74CM - Echostar XVII(S2866) - (107.1 W.L.)

TR74CM - SPACEWAY 1 - (103 W.L.)

TR74CM - SPACEWAY 2 - (99 W.L.)

TR74CM - SPACEWAY 3 - (94.95 W.L.)

TR98CM - AMC-15 - (105 W.L.)

TR98CM - AMC-16 - (85 W.L.)

TR98CM - EHOSTAR -9 - (121 W.L.)

TR98CM - Echostar XVII(S2866) - (107.1 W.L.)

TR98CM - SPACEWAY 1 - (103 W.L.)

TR98CM - SPACEWAY 2 - (99 W.L.)

TR98CM - SPACEWAY 3 - (94.95 W.L.)

SES-ASG-20130412-00317 E E980224 ACME Television Productions, LLC

Application for Consent to Assignment

Grant of Authority

Date Effective: 06/24/2013

Current Licensee: ACME Television Productions, LLC

FROM: ACME TELEVISION HOLDINGS, LLC

TO: Mojo Brands Media, LLC.

No. of Station(s) listed: 1

SES-ASG-20130506-00373 E E000353 Videocom Satellite Associates,inc

Application for Consent to Assignment

Grant of Authority

Date Effective: 06/24/2013

Current Licensee: Videocom Inc

FROM: VIDEOCOM, INC.

TO: Production & Satellite Services, Inc.

No. of Station(s) listed: 1

SES-ASG-20130619-00501 E WR53 Comcast of Arkansas/Florida/Louisiana/Minnesota/Mississippi/Tennessee, Inc.

Application for Consent to Assignment

Consummated

Date Effective: 06/18/2013

Current Licensee: TIME WARNER ENTERTAINMENT COMPANY LP

FROM: TIME WARNER ENTERTAINMENT COMPANY LP

TO: Comcast of Arkansas/Florida/Louisiana/Minnesota/Mississippi/Tennessee, Inc.

No. of Station(s) listed: 1

SES-ASG-20130619-00513 E E4107 KING BROADCASTING COMPANY

Application for Consent to Assignment

Grant of Authority

Date Effective: 06/24/2013

Current Licensee: KING BROADCASTING COMPANY

FROM: KING BROADCASTING COMPANY

TO: SANDER OPERATING CO. III LLC D/B/A KGW TELEVISION

No. of Station(s) listed: 1

SES-LIC-20120731-00705 E E120148 DIRECTV Enterprises, LLC

Application for Authority

06/20/2013 - 06/20/2028

Grant of Authority

Date Effective: 06/20/2013

Class of Station: Fixed Earth Stations

Nature of Service: Fixed Satellite Service

SITE ID: 1

LOCATION: 3800 Via Oro Ave., Los Angeles, Long Beach, CA

33 ° 49 ' 45.50 " N LAT.

118 ° 12 ' 39.10 " W LONG.

| ANTENNA ID: | 1 | 9.2 meters | General Dynamics | 9mKu-01-00 |
|-------------|-----------------------------|------------|------------------|---------------|
| | 11700.0000 - 12200.0000 MHz | 24M0G7W | 0.00 dBW | Digital Video |
| | 11700.0000 - 12200.0000 MHz | 36M0G7W | 0.00 dBW | Digital Video |
| | 13750.0000 - 14000.0000 MHz | 24M0G7W | 77.10 dBW | Digital Video |
| | 13750.0000 - 14000.0000 MHz | 36M0G7W | 77.10 dBW | Digital Video |
| | 3700.0000 - 4200.0000 MHz | 36M0G7W | 0.00 dBW | Digital Video |
| | 5925.0000 - 6425.0000 MHz | 36M0G7W | 73.00 dBW | Digital Video |
| | 5925.0000 - 6425.0000 MHz | 24M0G7W | 71.30 dBW | Digital Video |
| | 3700.0000 - 4200.0000 MHz | 24M0G7W | 0.00 dBW | Digital Video |
| | 14000.0000 - 14500.0000 MHz | 36M0G7W | 80.50 dBW | Digital Video |
| | 14000.0000 - 14500.0000 MHz | 24M0G7W | 80.50 dBW | Digital Video |
| | 14000.0000 - 14500.0000 MHz | 27M0G7W | 80.50 dBW | Digital Video |
| | 13750.0000 - 14000.0000 MHz | 27M0G7W | 77.10 dBW | Digital Video |
| | 11700.0000 - 12200.0000 MHz | 27M0G7W | 0.00 dBW | Digital Video |
| | 13750.0000 - 14000.0000 MHz | 51K2G1W | 50.40 dBW | Digital Data |
| | 14000.0000 - 14500.0000 MHz | 51K2G1W | 53.80 dBW | Digital Data |
| | 13750.0000 - 14000.0000 MHz | 1M44G1W | 64.90 dBW | Digital Data |
| | 14000.0000 - 14500.0000 MHz | 1M44G1W | 68.30 dBW | Digital Data |
| | 13750.0000 - 14000.0000 MHz | 2M20G1W | 66.70 dBW | Digital Data |
| | 14000.0000 - 14500.0000 MHz | 2M20G1W | 70.10 dBW | Digital Data |
| | 13750.0000 - 14000.0000 MHz | 2M90G1W | 67.90 dBW | Digital Data |
| | 14000.0000 - 14500.0000 MHz | 2M90G1W | 71.30 dBW | Digital Data |
| | 13750.0000 - 14000.0000 MHz | 5M00G1W | 70.30 dBW | Digital Data |
| | 14000.0000 - 14500.0000 MHz | 5M00G1W | 73.70 dBW | Digital Data |
| | 11700.0000 - 12200.0000 MHz | 51K2G1W | 0.00 dBW | Digital Data |
| | 11700.0000 - 12200.0000 MHz | 1M44G1W | 0.00 dBW | Digital Data |

| | | | |
|-----------------------------|---------|-----------|---------------|
| 11700.0000 - 12200.0000 MHz | 2M20G1W | 0.00 dBW | Digital Data |
| 11700.0000 - 12200.0000 MHz | 2M90G1W | 0.00 dBW | Digital Data |
| 11700.0000 - 12200.0000 MHz | 5M00G1W | 0.00 dBW | Digital Data |
| 5925.0000 - 6425.0000 MHz | 27M0G7W | 71.80 dBW | Digital Video |
| 3700.0000 - 4200.0000 MHz | 27M0G7W | 0.00 dBW | Digital Video |

Points of Communication:

- 1 - ALSAT - (ALSAT)
- 1 - GALAXY III-C - (95 W.L.)
- 1 - INTELSAT 16 - (58.10 W.L.)
- 1 - INTELSAT 21 - (58.0 W.L.)
- 1 - INTELSAT 9 - (58 W.L.)

SES-LIC-20130124-00089 E E130021 O3b Limited
 Application for Authority
 Grant of Authority

06/20/2013 - 06/20/2028
 Date Effective: 06/20/2013

Class of Station: Fixed Earth Stations

Nature of Service: Fixed Satellite Service

SITE ID: Texas Gateway
 LOCATION: 2719 County Rd 93 S, Wilbarger, South Vernon, TX
 34 ° 13 ' 4.73 " N LAT. 99 ° 23 ' 46.53 " W LONG.

| | | | | |
|-------------|-----------------------------|------------|-----------|---|
| ANTENNA ID: | Ant 1-3 | 7.3 meters | Viasat | MEO7 |
| | 29087.8000 - 29089.1000 MHz | 500KG2D | 85.14 dBW | TT&C |
| | 27600.0000 - 28400.0000 MHz | 216MG7D | 87.29 dBW | DVB-S2 (QPSK, 8APSK, 16APSK, 32APSK); Digital Data Link |
| | 27600.0000 - 28400.0000 MHz | 307KG7D | 52.29 dBW | DVB-S2 (QPSK, 8APSK, 16APSK, 32APSK); Digital Data Link |
| | 28600.0000 - 29100.0000 MHz | 216MG7D | 87.29 dBW | DVB-S2 (QPSK, 8APSK, 16APSK, 32APSK); Digital Data Link |
| | 28600.0000 - 29100.0000 MHz | 40M0G7D | 87.29 dBW | DVB-S2 (QPSK, 8APSK, 16APSK, 32APSK); Digital Data Link |
| | 28600.0000 - 29100.0000 MHz | 307KG7D | 52.29 dBW | DVB-S2 (QPSK, 8APSK, 16APSK, 32APSK); Digital Data Link |
| | 19296.2000 - 19299.9000 MHz | 300KG1D | | TT&C |

| | | | |
|-----------------------------|---------|----------|---|
| 17800.0000 - 18600.0000 MHz | 216MG7D | 0.00 dBW | DVB-S2 (QPSK, 8APSK, 16APSK, 32APSK); Digital Data Link |
| 17800.0000 - 18600.0000 MHz | 307KG7D | 0.00 dBW | DVB-S2 (QPSK, 8APSK, 16APSK, 32APSK); Digital Data Link |
| 18800.0000 - 19300.0000 MHz | 216MG7D | 0.00 dBW | DVB-S2 (QPSK, 8APSK, 16APSK, 32APSK); Digital Data Link |
| 18800.0000 - 19300.0000 MHz | 40M0G7D | 0.00 dBW | DVB-S2 (QPSK, 8APSK, 16APSK, 32APSK); Digital Data Link |
| 18800.0000 - 19300.0000 MHz | 307KG7D | 0.00 dBW | DVB-S2 (QPSK, 8APSK, 16APSK, 32APSK); Digital Data Link |

Points of Communication:

Texas Gateway - O3B-A - (Eq. NGSO)

SES-MFS-20120322-00290 E E060445 HNS License Sub, LLC
 Modification 02/27/2007 - 02/27/2022
 Granted in Part/ Deferred in Part Date Effective: 06/20/2013

Class of Station: Other

Nature of Service: Fixed Satellite Service

SITE ID: TR3.5M
 LOCATION: 50,000 (3.5m) CONUS, AK, HI, PR, VI
 0 ° 0 ' 0.00 " N LAT. 0 ° 0 ' 0.00 " W LONG.

| | | | |
|-----------------------------|------------|-----------|------------------------------------|
| ANTENNA ID: TR3.5 | 3.5 meters | Andrew | ES35SRT-1 |
| 29500.0000 - 30000.0000 MHz | 20M9G7W | 75.40 dBW | 16.348 MBPS, PSK, DIGITAL CARRIER |
| 29500.0000 - 30000.0000 MHz | 2M61G7W | 66.30 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| 29500.0000 - 30000.0000 MHz | 650KG7W | 60.30 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 60.30 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 20M9G7W | 75.40 dBW | 2,048 MBPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |

SITE ID: TFTR1.2M
 LOCATION: 1000 (1.2M) CONUS, AK, HI, PR, VI

| ANTENNA ID: | TFTR1.2 | 1.2 meters | AVL TECHNOLOGIES | 1210K |
|-------------|-----------------------------|------------|------------------|------------------------------------|
| | 29500.0000 - 30000.0000 MHz | 100KG7W | 42.70 dBW | QPSK, DATA, INROUTE, 64 KSPS |
| | 29300.0000 - 30000.0000 MHz | 2M00G7W | 55.90 dBW | QPSK, DATA, INROUTE, 1600 KSPS |
| | 29300.0000 - 30000.0000 MHz | 2M61G7W | 55.90 dBW | QPSK, DATA, INROUTE, 2048 KSPS |
| | 19700.0000 - 20200.0000 MHz | 100KG7W | | QPSK, DATA, OUTROUTE, 64 KSPS |
| | 19700.0000 - 20200.0000 MHz | 500MG7W | | QPSK, DATA, OUTROUTE, 30 MSPS |
| | 29300.0000 - 29500.0000 MHz | 100KG7W | 42.70 dBW | QPSK, DATA, INROUTE, 64 KSPS |
| | 29300.0000 - 29500.0000 MHz | 2M61G7W | 55.90 dBW | QPSK, DATA, INROUTE, 2048 KSPS |
| | 18300.0000 - 19300.0000 MHz | 100KG7W | | QPSK, DATA, OUTROUTE, 64 KSPS |
| | 18300.0000 - 19300.0000 MHz | 2M61G7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |

SITE ID: TFTR74CM
 LOCATION: 25,000 (74cm) CONUS, AK, HI, PR, VI
 0 ° 0 ' 0.00 " N LAT. 0 ° 0 ' 0.00 " W LONG.

| ANTENNA ID: | 74CM(TA) | 0.74 meters | Prodelin | HNS1031929 |
|-------------|-----------------------------|-------------|-----------|------------------------------------|
| | 29500.0000 - 30000.0000 MHz | 650KG7W | 47.00 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| | 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| | 18300.0000 - 18800.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| | 28350.0000 - 28600.0000 MHz | 650KG7W | 47.00 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| | 18300.0000 - 18800.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| | 28350.0000 - 28600.0000 MHz | 650KG7W | 47.00 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| | 29300.0000 - 29500.0000 MHz | 650KG7W | 47.00 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| | 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| | 18800.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |

| | | | |
|-----------------------------|-------------|-----------|------------------------------------|
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| ANTENNA ID: 74CM(TB) | 0.74 meters | Raven | AN8-074R |
| 29500.0000 - 30000.0000 MHz | 650KG7W | 47.00 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ, PSK, DIGITAL CARRIER |
| 18300.0000 - 18800.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 28350.0000 - 28600.0000 MHz | 650KG7W | 45.80 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 45.80 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 18800.0000 MHz | 500MG7W | | 500 MHZ, PSK, DIGITAL CARRIER |
| 28350.0000 - 28600.0000 MHz | 650KG7W | 45.80 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 45.80 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| 18800.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| ANTENNA ID: 74CM(TC) | 0.74 meters | GD SATCOM | AN8-074P |
| 29500.0000 - 30000.0000 MHz | 650KG7W | 47.00 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ, PSK, DIGITAL CARRIER |
| 18300.0000 - 18800.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 28350.0000 - 28600.0000 MHz | 650KG7W | 47.00 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 47.00 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 18800.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 28350.0000 - 28600.0000 MHz | 650KG7W | 47.00 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 47.00 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |

| | | |
|-----------------------------|---------|------------------------------------|
| 18800.0000 - 19300.0000 MHz | 500MG7W | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
|-----------------------------|---------|------------------------------------|

| | | |
|-----------------------------|---------|------------------------------------|
| 19700.0000 - 20200.0000 MHz | 100KG7W | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
|-----------------------------|---------|------------------------------------|

SITE ID: TFTR98CM

LOCATION: 10,000 (98cm) CONUS, AK, HI, PR, VI
0 ° 0 ' 0.00 " N LAT.

0 ° 0 ' 0.00 " W LONG.

| | | | |
|-----------------------|-------------|----------------|------------------|
| ANTENNA ID: TFTR98(2) | 0.98 meters | Raven Mfg.Ltd. | AN8-098RAN-098KA |
|-----------------------|-------------|----------------|------------------|

| | | | |
|-----------------------------|---------|-----------|--------------------------------|
| 29500.0000 - 30000.0000 MHz | 650KG7W | 49.40 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
|-----------------------------|---------|-----------|--------------------------------|

| | | | |
|-----------------------------|---------|-----------|----------------------------------|
| 29500.0000 - 30000.0000 MHz | 2M61G7W | 53.40 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
|-----------------------------|---------|-----------|----------------------------------|

| | | |
|-----------------------------|---------|------------------------------------|
| 19700.0000 - 20200.0000 MHz | 500MG7W | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
|-----------------------------|---------|------------------------------------|

| | | | |
|-----------------------------|---------|-----------|--------------------------------|
| 29300.0000 - 29500.0000 MHz | 650KG7W | 49.40 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
|-----------------------------|---------|-----------|--------------------------------|

| | | | |
|-----------------------------|---------|-----------|----------------------------------|
| 29300.0000 - 29500.0000 MHz | 2M61G7W | 53.40 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
|-----------------------------|---------|-----------|----------------------------------|

| | | |
|-----------------------------|---------|------------------------------------|
| 18300.0000 - 19300.0000 MHz | 100KG7W | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
|-----------------------------|---------|------------------------------------|

| | | |
|-----------------------------|---------|------------------------------------|
| 18300.0000 - 19300.0000 MHz | 500MG7W | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
|-----------------------------|---------|------------------------------------|

| | | |
|-----------------------------|---------|------------------------------------|
| 19700.0000 - 20200.0000 MHz | 100KG7W | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
|-----------------------------|---------|------------------------------------|

| | | | |
|----------------------|-------------|-----------|----------|
| ANTENNA ID: TFTR98CM | 0.98 meters | GD SATCOM | AN8-098P |
|----------------------|-------------|-----------|----------|

| | | | |
|-----------------------------|---------|-----------|--------------------------------|
| 29500.0000 - 30000.0000 MHz | 650KG7W | 49.40 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
|-----------------------------|---------|-----------|--------------------------------|

| | | | |
|-----------------------------|---------|-----------|----------------------------------|
| 29500.0000 - 30000.0000 MHz | 2M61G7W | 53.40 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
|-----------------------------|---------|-----------|----------------------------------|

| | | |
|-----------------------------|---------|------------------------------------|
| 19700.0000 - 20200.0000 MHz | 500MG7W | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
|-----------------------------|---------|------------------------------------|

| | | | |
|-----------------------------|---------|-----------|--------------------------------|
| 29300.0000 - 29500.0000 MHz | 650KG7W | 49.40 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
|-----------------------------|---------|-----------|--------------------------------|

| | | | |
|-----------------------------|---------|-----------|----------------------------------|
| 29300.0000 - 29500.0000 MHz | 2M61G7W | 53.40 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
|-----------------------------|---------|-----------|----------------------------------|

| | | |
|-----------------------------|---------|------------------------------------|
| 18300.0000 - 19300.0000 MHz | 100KG7W | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
|-----------------------------|---------|------------------------------------|

| | | |
|-----------------------------|---------|------------------------------------|
| 18300.0000 - 19300.0000 MHz | 500MG7W | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
|-----------------------------|---------|------------------------------------|

| | | |
|-----------------------------|---------|------------------------------------|
| 19700.0000 - 20200.0000 MHz | 100KG7W | 100 MHZ WIDE, PSK, DIGITAL CARRIER |
|-----------------------------|---------|------------------------------------|

| | | | | |
|-------------|-----------------------------|-------------|------------------|--------------------------------|
| ANTENNA ID: | TFTR98(3) | 0.98 meters | AVL TECHNOLOGIES | 1010K |
| | 29500.0000 - 30000.0000 MHz | 500MG7W | 41.20 dBW | QPSK, DATA, INROUTE, 64 KSPS |
| | 29500.0000 - 30000.0000 MHz | 1M48G7W | 52.90 dBW | QPSK, DATA, INROUTE, 1100 KSPS |
| | 29500.0000 - 30000.0000 MHz | 2M61G7W | 52.90 dBW | QPSK, DATA, INROUTE, 2048 KSPS |
| | 19700.0000 - 20200.0000 MHz | 100KG7W | | QPSK, DATA, OUTROUTE, 64 KSPS |
| | 19700.0000 - 20200.0000 MHz | 500MG7W | | QPSK, DATA, OUTROUTE, 30 MSPS |
| | 29300.0000 - 29500.0000 MHz | 2M61G7W | 52.90 dBW | QPSK, DATA, INROUTE, 204K KSPS |
| | 29300.0000 - 29500.0000 MHz | 500MG7W | 41.20 dBW | QPSK, DATA, INROUTE, 64 KSPS |
| | 18300.0000 - 19300.0000 MHz | 100KG7W | | QPSK, DATA, OUTROUTE, 64 KSPS |
| | 18300.0000 - 19300.0000 MHz | 500MG7W | | QPSK, DATA, OUTROUTE, 30 MSPS |

SITE ID: TR98CM

LOCATION: 250,000 (98cm) CONUS, AK, HI, PR, VI

0 ° 0 ' 0.00 " N LAT.

0 ° 0 ' 0.00 " W LONG.

| | | | | |
|-------------|-----------------------------|-------------|-----------------|------------------------------------|
| ANTENNA ID: | TR98CM(1) | 0.98 meters | GD SATCOM | AN8-098P |
| | 29500.0000 - 30000.0000 MHz | 650KG7W | 49.40 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| | 29500.0000 - 30000.0000 MHz | 2M61G7W | 53.40 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| | 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| | 29300.0000 - 29500.0000 MHz | 2M61G7W | 53.40 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| | 29300.0000 - 29500.0000 MHz | 650KG7W | 49.40 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| | 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| | 18300.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| | 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| ANTENNA ID: | TR98CM(2) | 0.98 meters | Raven Mfg. Ltd. | AN8-098R |
| | 29500.0000 - 30000.0000 MHz | 650KG7W | 49.40 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| | 29500.0000 - 30000.0000 MHz | 2M61G7W | 53.40 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |

| | | | |
|-----------------------------|---------|-----------|------------------------------------|
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 45.80 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 49.40 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 2M61G7W | 53.40 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |

SITE ID: TR74CM

LOCATION: 2,000,000 (74cm) CONUS, AK, HI, PR, VI

0 ° 0 ' 0.00 " N LAT.

0 ° 0 ' 0.00 " W LONG.

ANTENNA ID: 74CM(FA) 0.74 meters GD SATCOM AN8-074P

| | | | |
|-----------------------------|---------|-----------|------------------------------------|
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ, PSK, DIGITAL CARRIER |
| 18300.0000 - 18800.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 28350.0000 - 28600.0000 MHz | 650KG7W | 45.80 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| 18800.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |

ANTENNA ID: 74CM(FB) 0.74 meters Prodelin HNS1031929

| | | | |
|-----------------------------|---------|-----------|--------------------------------|
| 29300.0000 - 30000.0000 MHz | 650KG7W | 45.80 dBW | 512 KSPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ, PSK, DIGITAL CARRIER |

ANTENNA ID: 74CM(FC) 0.74 meters Raven AN8-074R

| | | | |
|-----------------------------|---------|-----------|-------------------------------------|
| 29300.0000 - 30000.0000 MHz | 650KG7W | 47.00 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PASK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |

SITE ID: TR1.8M
LOCATION: 50,000 (1.8m) CONUS, AK, HI, PR, VI
0 ° 0 ' 0.00 " N LAT. 0 ° 0 ' 0.00 " W LONG.

| | | | |
|-----------------------------|------------|-----------|------------------------------------|
| ANTENNA ID: TR1.8 | 1.8 meters | Prodelin | 3180-131 |
| 29500.0000 - 30000.0000 MHz | 20M9G7W | 69.80 dBW | 16.348 MBPS, PSK, DIGITAL CARRIER |
| 29500.0000 - 30000.0000 MHz | 2M61G7W | 60.70 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| 29500.0000 - 30000.0000 MHz | 650KG7W | 54.70 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 54.70 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 20M9G7W | 69.80 dBW | 16.348 MBPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |

SITE ID: TR1.2M
LOCATION: 100,000 (1.2m) CONUS, AK, HI, PR, VI
0 ° 0 ' 0.00 " N LAT. 0 ° 0 ' 0.00 " W LONG.

| | | | |
|-----------------------------|------------|-----------|----------------------------------|
| ANTENNA ID: TR1.2 | 1.2 meters | Prodelin | 3120-131 |
| 29500.0000 - 30000.0000 MHz | 2M61G7W | 57.20 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| 29500.0000 - 30000.0000 MHz | 650KG7W | 51.20 dBW | 512 KBPS, PSK, DIGITAL CARRIER |

| | | | |
|-----------------------------|---------|-----------|------------------------------------|
| 19700.0000 - 20200.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 650KG7W | 51.20 dBW | 512 KBPS, PSK, DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 2M61G7W | 57.20 dBW | 2.048 MBPS, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 500MG7W | | 500 MHZ WIDE, PSK, DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | 100 KHZ WIDE, PSK, DIGITAL CARRIER |

SITE ID: TFTR98CM
LOCATION: 10,000 (1.0m) CONUS, AK, HI, PR, VI

SITE ID: TR69CM
LOCATION: 1,000,000 (69CM)

| | | | |
|-----------------------------|-------------|-----------|--|
| ANTENNA ID: 69CM | 0.69 meters | RAVEN | HNS-AN8-069R |
| 29300.0000 - 29500.0000 MHz | 100KG7W | 38.50 dBW | M-ARY PHASE SHIFT KEYING DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 2M00G7W | 46.80 dBW | M-ARY PHASE SHIFT KEYING DIGITAL CARRIER |
| 29300.0000 - 29500.0000 MHz | 670KG7W | 46.80 dBW | M-ARY PHASE SHIFT KEYING DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 100KG7W | | M-ARY PHASE SHIFT KEYING DIGITAL CARRIER |
| 18300.0000 - 19300.0000 MHz | 500MG7W | | M-ARY PHASE SHIFT KEYING DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 100KG7W | | M-ARY PHASE SHIFT KEYING DIGITAL CARRIER |
| 19700.0000 - 20200.0000 MHz | 500MG7W | | M-ARY PHASE SHIFT KEYING DIGITAL CARRIER |

Points of Communication:

- TFTR1.2M - AMC-15 - (105 W.L.)
- TFTR1.2M - AMC-16 - (85 W.L.)
- TFTR1.2M - ECHOSTAR -9 - (121 W.L.)
- TFTR1.2M - Echostar XVII(S2866) - (107.1 W.L.)

TFTR1.2M - SPACEWAY 3 - (94.95 W.L.)

TFTR74CM - AMC-15 - (105 W.L.)

TFTR74CM - AMC-16 - (85 W.L.)

TFTR74CM - DIRECTV 10 - (102.8 W.L.)

TFTR74CM - DIRECTV 11 - (99.2 W.L.)

TFTR74CM - EHOSTAR -9 - (121 W.L.)

TFTR74CM - Echostar XVII(S2866) - (107.1 W.L.)

TFTR74CM - SPACEWAY 1 - (103 W.L.)

TFTR74CM - SPACEWAY 2 - (99 W.L.)

TFTR74CM - SPACEWAY 3 - (94.95 W.L.)

TFTR98CM - AMC-15 - (105 W.L.)

TFTR98CM - AMC-16 - (85 W.L.)

TFTR98CM - EHOSTAR -9 - (121 W.L.)

TFTR98CM - Echostar XVII(S2866) - (107.1 W.L.)

TFTR98CM - SPACEWAY 1 - (103 W.L.)

TFTR98CM - SPACEWAY 2 - (99 W.L.)

TFTR98CM - SPACEWAY 3 - (94.95 W.L.)

TR1.2M - AMC-15 - (105 W.L.)

TR1.2M - AMC-16 - (85 W.L.)

TR1.2M - EHOSTAR -9 - (121 W.L.)

TR1.2M - Echostar XVII(S2866) - (107.1 W.L.)

TR1.2M - SPACEWAY 1 - (103 W.L.)

TR1.2M - SPACEWAY 2 - (99 W.L.)

TR1.2M - SPACEWAY 3 - (94.95 W.L.)

TR1.8M - AMC-15 - (105 W.L.)

TR1.8M - AMC-16 - (85 W.L.)

TR1.8M - EHOSTAR -9 - (121 W.L.)

TR1.8M - Echostar XVII(S2866) - (107.1 W.L.)

TR1.8M - SPACEWAY 1 - (103 W.L.)

TR1.8M - SPACEWAY 2 - (99 W.L.)

TR1.8M - SPACEWAY 3 - (94.95 W.L.)

TR3.5M - AMC-15 - (105 W.L.)

TR3.5M - AMC-16 - (85 W.L.)

TR3.5M - EHOSTAR -9 - (121 W.L.)

TR3.5M - Echostar XVII(S2866) - (107.1 W.L.)

TR3.5M - SPACEWAY 1 - (103 W.L.)

TR3.5M - SPACEWAY 2 - (99 W.L.)

TR3.5M - SPACEWAY 3 - (94.95 W.L.)

TR69CM - AMC-15 - (105 W.L.)

TR69CM - AMC-16 - (85 W.L.)

TR69CM - EHOSTAR -9 - (121 W.L.)

TR69CM - Echostar XVII(S2866) - (107.1 W.L.)

TR69CM - SPACEWAY 1 - (103 W.L.)

TR69CM - SPACEWAY 2 - (99 W.L.)

TR69CM - SPACEWAY 3 - (94.95 W.L.)

TR74CM - AMC-15 - (105 W.L.)

TR74CM - AMC-16 - (85 W.L.)

TR74CM - DIRECTV 10 - (102.8 W.L.)

TR74CM - DIRECTV 11 - (99.2 W.L.)

TR74CM - EHOSTAR -9 - (121 W.L.)

TR74CM - Echostar XVII(S2866) - (107.1 W.L.)

TR74CM - SPACEWAY 1 - (103 W.L.)

TR74CM - SPACEWAY 2 - (99 W.L.)

TR74CM - SPACEWAY 3 - (94.95 W.L.)

TR98CM - AMC-15 - (105 W.L.)

TR98CM - AMC-16 - (85 W.L.)

TR98CM - EHOSTAR -9 - (121 W.L.)

TR98CM - Echostar XVII(S2866) - (107.1 W.L.)

TR98CM - SPACEWAY 1 - (103 W.L.)

TR98CM - SPACEWAY 2 - (99 W.L.)

TR98CM - SPACEWAY 3 - (94.95 W.L.)

SES-MFS-20130424-00335 E E980180 EchoStar Broadcasting Corporation

Modification

05/29/2008 - 05/29/2023

Grant of Authority

Date Effective: 06/21/2013

Class of Station: Fixed Earth Stations

Nature of Service: Direct Broadcast Satellite Service, Fixed Satellite Service

SITE ID: 1

LOCATION: 801 N. DISH DRIVE, MARICOPA, GILBERT, AZ

33 ° 21 ' 56.50 " N LAT.

111 ° 48 ' 48.20 " W LONG.

ANTENNA ID: 1 13 meters VERTEX 13 KPK

17790.0000 - 17800.0000 MHz 800KG2D 72.31 dBW TELECOMMAND

17300.0000 - 17800.0000 MHz 24M0G7W 87.08 dBW DIGITAL VIDEO, VOICE AND DATA

12200.0000 - 12210.0000 MHz 800KG2D 0.00 dBW TELEMETRY

12690.0000 - 12700.0000 MHz 800KG2D TELEMETRY

17300.0000 - 17310.0000 MHz 800KG2D 72.31 dBW TELECOMMAND

12200.0000 - 12700.0000 MHz 24M0G7W DIGITAL VIDEO, VOICE AND DATA

Points of Communication:

1 - CIEL 2 - (128.85 W.L.)

1 - ECHOSTAR 8 - (77 W.L.)

1 - ECHOSTAR 8 (MEX) - (76.9)

1 - ECHOSTAR/DISH - ()

1 - NIMIQ 5 - (72.7 W.L.)

1 - QUETZSAT-1 - (77.00 W.L.)

SES-MFS-20130424-00336 E E080058 EchoStar Broadcasting Corporation

Modification

04/30/2008 - 04/30/2023

Grant of Authority

Date Effective: 06/21/2013

Class of Station: Fixed Earth Stations

Nature of Service: Direct Broadcast Satellite Service, Fixed Satellite Service

SITE ID: 1
 LOCATION: 801 N. DISH DRIVE, MARICOPA, GILBERT, AZ
 33 ° 21 ' 55.60 " N LAT. 111 ° 48 ' 49.10 " W LONG.

| ANTENNA ID: | GD9 | 9 meters | VERTEX | 9M | |
|-------------|-----------------------------|----------|---------|-----------|-----------------------------------|
| | 17790.0000 - 17800.0000 MHz | | 1M50F3D | 80.84 dBW | Ranging Tones |
| | 17790.0000 - 17800.0000 MHz | | 800KG2D | 78.10 dBW | Telecommand |
| | 17300.0000 - 17310.0000 MHz | | 1M50F3D | 80.84 dBW | Ranging Tones |
| | 17300.0000 - 17310.0000 MHz | | 800KG2D | 78.10 dBW | Telecommand |
| | 12690.0000 - 12700.0000 MHz | | 1M50F3D | 0.00 dBW | Spacecraft Ranging Tones |
| | 12690.0000 - 12700.0000 MHz | | 1M50F2D | 0.00 dBW | Telemetry |
| | 12200.0000 - 12210.0000 MHz | | 1M50F3D | 0.00 dBW | Spacecraft Ranging Tones |
| | 12200.0000 - 12210.0000 MHz | | 1M50F2D | 0.00 dBW | Telemetry |
| | 17310.0000 - 17790.0000 MHz | | 24M0G7W | 86.50 dBW | Digital Data and Compressed Video |
| | 12210.0000 - 12690.0000 MHz | | 24M0G7W | 0.00 dBW | Digital Data and Compressed Video |
| ANTENNA ID: | GD10 | 9 meters | VERTEX | 9M | |
| | 17790.0000 - 17800.0000 MHz | | 800KG2D | 78.10 dBW | Telecommand |
| | 17310.0000 - 17790.0000 MHz | | 24M0G7W | 86.50 dBW | Digital Data and Compressed Video |
| | 17300.0000 - 17310.0000 MHz | | 1M50F3D | 80.84 dBW | Ranging Tones |
| | 12690.0000 - 12700.0000 MHz | | 1M50F3D | 0.00 dBW | Spacecraft Ranging Tones |
| | 12690.0000 - 12700.0000 MHz | | 1M50F2D | 0.00 dBW | Telemetry |
| | 12210.0000 - 12690.0000 MHz | | 24M0G7W | 0.00 dBW | Digital Data and Compressed Video |
| | 12200.0000 - 12210.0000 MHz | | 1M50F2D | 0.00 dBW | Telemetry |
| | 17790.0000 - 17800.0000 MHz | | 1M50F3D | 80.84 dBW | Ranging Tones |
| | 17300.0000 - 17310.0000 MHz | | 800KG2D | 78.10 dBW | Telecommand |
| | 12200.0000 - 12210.0000 MHz | | 1M50F3D | 0.00 dBW | Spacecraft Ranging Tones |

Points of Communication:

1 - ECHOSTAR 1 - (77 W.L.)

1 - EHOSTAR 2 - (148 W.L.)
 1 - EHOSTAR 3 - (61.5 W.L.)
 1 - EHOSTAR 4 - (77 W.L.)
 1 - EHOSTAR 5 - (129 W.L.)
 1 - EHOSTAR 6 - (110 W.L.)
 1 - EHOSTAR 6 - (72.7 W.L.)
 1 - EHOSTAR 7 - (119 W.L.)
 1 - EHOSTAR 8 - (110 W.L.)
 1 - EHOSTAR 8 - (77 W.L.)
 1 - EHOSTAR 8 (MEX) - (76.9)
 1 - EHOSTAR I - (148.0 W.L.)
 1 - QUETZSAT-1 - (77.00 W.L.)
 1 - QUETZSAT-1 - (77.00 W.L.)
 1 - RAINBOW1 - (61.5 W.L.)

SES-MFS-20130424-00337 E E980174 EchoStar Broadcasting Corporation
 Modification
 Grant of Authority

05/29/2008 - 05/29/2023
 Date Effective: 06/21/2013

Class of Station: Fixed Earth Stations

Nature of Service: Direct Broadcast Satellite Service, Fixed Satellite Service

SITE ID: GILBERT #2
LOCATION: 801 N. DISH DRIVE (#2), MARICOPA, GILBERT, AZ
 33 ° 21 ' 55.30 " N LAT. 111 ° 48 ' 48.20 " W LONG.

| ANTENNA ID: | GT5 | 13 meters | VERTEX | 13 KPK |
|-------------|-----------------------------|-----------|-----------|----------------------------|
| | 17300.0000 - 17800.0000 MHz | 24M0G7W | 87.08 dBW | DIGITAL VIDEO, VOICE, DATA |
| | 17790.0000 - 17800.0000 MHz | 800KG2D | 72.31 dBW | TELECOMMAND |
| | 17300.0000 - 17310.0000 MHz | 800KG2D | 72.31 dBW | TELECOMMAND |
| | 12200.0000 - 12700.0000 MHz | 24M0G7W | | DIGITAL VIDEO, VOICE, DATA |
| | 12690.0000 - 12700.0000 MHz | 800KG2D | | TELEMETRY |
| | 12200.0000 - 12210.0000 MHz | 800KG2D | | TELEMETRY |

Points of Communication:

GILBERT #2 - CIEL 2 - (128.85 W.L.)

GILBERT #2 - ECHOSTAR 1 - (77.15 W.L.)

GILBERT #2 - ECHOSTAR 10 - (110.2 W.L.)

GILBERT #2 - ECHOSTAR 11 - (110 W.L.)

GILBERT #2 - ECHOSTAR 12 - (61.35 W.L.)

GILBERT #2 - ECHOSTAR 14 - (118.9 W.L.)

GILBERT #2 - ECHOSTAR 15 - (61.55 W.L.)

GILBERT #2 - ECHOSTAR 3 - (61.45)

GILBERT #2 - ECHOSTAR 7 - (118.8 W.L.)

GILBERT #2 - ECHOSTAR 8 - (77 W.L.)

GILBERT #2 - ECHOSTAR 8 - (77.05 W.L.)

GILBERT #2 - ECHOSTAR 8 (MEX) - (76.9)

GILBERT #2 - ECHOSTAR/DISH - ()

GILBERT #2 - NIMIQ 5 - (72.7 W.L.)

GILBERT #2 - QUETZSAT-1 - (77.00 W.L.)

SES-MOD-20130429-00347 E E030101 Intelsat License LLC

Application for Modification

10/06/2003 - 10/06/2018

Grant of Authority

Date Effective: 06/20/2013

Class of Station: Fixed Earth Stations

Nature of Service: Fixed Satellite Service

SITE ID: 1

LOCATION: 17633 TECHNOLOGY BLVD., WASHINGTON, HAGERSTOWN, MD

39 ° 35 ' 59.60 " N LAT.

77 ° 45 ' 17.40 " W LONG.

| ANTENNA ID: | 1 | 16.4 meters | VERTEX | 16.4 THC |
|-------------|---------------------------|-------------|-----------|---|
| | 5925.0000 - 6425.0000 MHz | 36M0F8W | 83.00 dBW | Analog video with associated audio carriers |
| | 5925.0000 - 6425.0000 MHz | 800KFXW | 79.30 dBW | Analog carrier |
| | 5925.0000 - 6425.0000 MHz | 72M0G7W | 83.00 dBW | DIGITAL, Data |
| | 5925.0000 - 6425.0000 MHz | 100KG7D | 70.30 dBW | DIGITAL, Data |
| | 5850.0000 - 5925.0000 MHz | 36M0F8W | 83.00 dBW | Analog video with associated audio carriers |

| | | | |
|---------------------------|---------|-----------|---|
| 5850.0000 - 5925.0000 MHz | 800KFXW | 79.30 dBW | Analog carrier |
| 5850.0000 - 5925.0000 MHz | 72M0G7W | 83.00 dBW | DIGITAL, Data |
| 5850.0000 - 5925.0000 MHz | 100KG7D | 70.30 dBW | DIGITAL, Data |
| 3700.0000 - 4200.0000 MHz | 36M0F8W | | Analog video with associated audio carriers |
| 3700.0000 - 4200.0000 MHz | 800KFXW | | Analog carrier |
| 3700.0000 - 4200.0000 MHz | 72M0G7W | | DIGITAL, Data |
| 3700.0000 - 4200.0000 MHz | 100KG7D | | DIGITAL, Data |
| 3625.0000 - 3700.0000 MHz | 100KG7D | | DIGITAL, Data |
| 3625.0000 - 3700.0000 MHz | 72M0G7W | | DIGITAL, Data |
| 3625.0000 - 3700.0000 MHz | 36M0F8W | | Analog video with associated audio carriers |
| 3625.0000 - 3700.0000 MHz | 800KFXW | | Analog carrier |
| 5925.0000 - 6425.0000 MHz | 36M0G7W | 89.00 dBW | DIGITAL, DATA |
| 5925.0000 - 6425.0000 MHz | 72M0G7W | 89.00 dBW | DIGITAL, DATA |

Points of Communication:

- 1 - ALSAT - (ALSAT)
 - 1 - INTELSAT 805 (S2404) - (304.5 E.L.)
 - 1 - INTELSAT AOR - (310.0 E.L.)
 - 1 - INTELSAT AOR - (325.5 E.L.)
 - 1 - INTELSAT AOR - (328.5 E.L.)
 - 1 - INTELSAT AOR - (330.5 E.L.)
 - 1 - INTELSAT AOR - (332.5 E.L.)
 - 1 - INTELSAT AOR - (335.5 E.L.)
 - 1 - INTELSAT AOR - (340.0 E.L.)
 - 1 - INTELSAT AOR - (342.0 E.L.)
 - 1 - INTELSAT AOR(S2398) - (307.0 E.L.)
-

SES-STA-20130603-00464 E Universal Space Network, Inc.
Special Temporary Authority
Grant of Authority Date Effective: 06/20/2013

Class of Station:

On June 20, 2013, Universal Space Network, Inc. was granted special temporary authority, with conditions, for a period of ten days beginning on June 20, to use its fixed earth station in Naalehu, Ka'u, HI, to receive telemetry information on the center frequency of 2218.0 MHz (space-to-Earth) from the Soyuz launch vehicle that will launch O3b's NGSO satellites.

Points of Communication:

SES-T/C-20130502-00357 E E120106 Gogo LLC
Application for Consent to Transfer of Control
Grant of Authority Date Effective: 06/25/2013

Current Licensee: Gogo LLC
FROM: Ripplewood Partners II, LP
TO: Gogo Inc.

No. of Station(s) listed: 1

SES-T/C-20130619-00507 E E060176 KVUE Television, Inc.
Application for Consent to Transfer of Control
Grant of Authority Date Effective: 06/24/2013

Current Licensee: KVUE Television, Inc.
FROM: SHAREHOLDERS OF BELO CORP.
TO: Gannett Co., Inc.

No. of Station(s) listed: 1

SES-T/C-20130619-00508 E E060052 WVEC TELEVISION, INC.
Application for Consent to Transfer of Control
Grant of Authority Date Effective: 06/24/2013

Current Licensee: WVEC TELEVISION, INC.
FROM: SHAREHOLDERS OF BELO CORP.
TO: Gannett Co., Inc.

No. of Station(s) listed: 2

Dismissal

SES-STA-20130322-00289 E980180 EchoStar Broadcasting Corporation

Application was withdrawn by letter filed on May 8, 2013.

SES-STA-20130322-00290 E980174 EchoStar Broadcasting Corporation

Application was withdrawn by letter filed on May 8, 2013.

SES-STA-20130322-00291 E080120 EchoStar Broadcasting Corporation

Application was withdrawn by letter filed on May 8, 2013.

SES-STA-20130322-00292 E080058 EchoStar Broadcasting Corporation

Application was withdrawn by letter filed on May 8, 2013.

SES-STA-20130611-00484 E130021 O3b Limited

Application is dismissed as moot. See IBFS File No. SES-LIC-20130124-00089 was granted on 6/20/2013.

For more information concerning this Notice, contact the Satellite Division at 418-0719; TTY 202-418-2555.