

STA Extension Request

E000232 provides service to the Defense Media Center (“DMC”) located at March AFB. E000232 provides Armed Forces Radio (“AFR”) and Armed Forces Television (“AFT”) to U.S. Military installations throughout the Pacific Rim. Due to operational and budgetary changes, DMC was required to change the satellite it uses to distribute AFR and AFT to ISS19, or possibly ISS8. This change took place on February 19, 2015.

An application to modify the license for E000232 was filed on April 1, 2014, File Number SES-MOD-20150401-00187, and amended on April 8, 2015, by letter. Allen Communications requests an extension of the special temporary authority in SES-STA-20150213-00075 as most recently extended by SES-STA-20150421-00244, and conversion to a prior use STA for the modification application. A copy the modification application’s schedule B, including the letter amendment is attached.

Extension of the STA will permit continuity of AFR and AFT service throughout the Pacific Rim.

SATELLITE EARTH STATION AUTHORIZATIONS
 FCC Form 312 – Schedule B:(Technical and Operational Description)
 FOR OFFICIAL USE ONLY

Location of Earth Station Site

E1. Site Identifier:	9.3 M	E5. Call Sign:	E000232
E2. Contact Name	Bill Allen	E6. Phone Number:	562-902-7691
E3. Street:	1363 Z Street	E7. City:	March Air Res. Base
	Broadcast Center	E8. County:	Riverside
E4. State	CA	E9. Zip Code	92518
E10. Area of Operation:	Pacific Rim		
E11. Latitude:	33 °54 '21.7 "N		
E12. Longitude:	117 °14 '57.8 "W		
E13. Lat/Lon Coordinates are:	<input type="radio"/> NAD-27	<input checked="" type="radio"/> NAD-83	<input type="radio"/> N/A
E14. Site Elevation (AMSL):	468.5 meters		

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide as a technical analysis showing compliance with two-degree spacing policy.

Yes No N/A

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non-geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	<input type="radio"/> Yes <input checked="" type="radio"/> No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as FreqCoord	<input checked="" type="radio"/> Yes <input type="radio"/> No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	<input checked="" type="radio"/> Yes <input type="radio"/> No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	<input type="radio"/> Yes <input checked="" type="radio"/> No

POINTS OF COMMUNICATION

Satellite Name: PERMITTED LIST If you selected OTHER, please enter the following:	
E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:

POINTS OF COMMUNICATION (Destination Points)

E25. Site Identifier:	
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E26. Common Name:	E27. Country:
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ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size<meters>	E41/42. Antenna Gain Transmint and/or Recieve (____ dBi at ____ GHz)	
9.3 M	9.3 M	2	Andrew Corp	ESA93	9.3	50.7 dBi at 4	
9.3 M	9.3 M	2	Andrew Corp	ESA93	9.3	53.9 dBi at 6	

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	E36. Above Sea Level(meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers(dBW)
9.3 M	0.0/0.0	10.0	478.5	0.0	78.3	0.0	72.8

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V, L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
9.3 M	3842 3878	R	Horizontal and Vertical	1M23G7W	0.0	0.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)							
BPSK, QPSK, 8PSK, QAM, FEC Rates 1/2 - 7/8, Variuos Data Rates, Various Information							
9.3 M	3842	3878	R	Horizontal and Vertical	36M0G7W	0.0	0.0
E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)							
BPSK, QPSK, 8PSK, QAM, FEC Rates 1/2 - 7/8, Variuos Data Rates, Various Information							
9.3 M	6067	6103	T	Horizontal and Vertical	1M23G7W	58.2	33.3
E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)							
BPSK, QPSK, 8PSK, QAM, FEC Rates 1/2 - 7/8, Variuos Data Rates, Various Information							
9.3 M	6067	6103	T	Horizontal and Vertical	36M0G7W	72.8	33.3

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

BPSK, QPSK, 8PSK, QAM, FEC Rates 1/2 - 7/8, Variuos Data Rates, Various Information

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/Western Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
9.3 M	Geostationary	3842 3878	194.0/194.0	262.5	2.3	262.5	2.3	0.0
	Geostationary	6067 6103	194.0/194.0	262.5	2.3	262.5	2.3	-3.6

REMOTE CONTROL POINT LOCATION

E61. Call Sign		E66. Phone Number	
NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.			
E62. Street Address			
E63. City	E68. County	E67/68. State/Country /	E64. Zip Code

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

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THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104–13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

Analysis of Non-Ionizing Radiation for a 9.3-Meter Earth Station System

This report analyzes the non-ionizing radiation levels for a 9.3-meter earth station system. The analysis and calculations performed in this report comply with the methods described in the FCC Office of Engineering and Technology Bulletin, No. 65 first published in 1985 and revised in 1997 in Edition 97-01. The radiation safety limits used in the analysis are in conformance with the FCC R&O 96-326. Bulletin No. 65 and the FCC R&O specifies that there are two separate tiers of exposure limits that are dependant on the situation in which the exposure takes place and/or the status of the individuals who are subject to the exposure. The Maximum Permissible Exposure (MPE) limits for persons in a General Population/Uncontrolled environment are shown in Table 1. The General Population/Uncontrolled MPE is a function of transmit frequency and is for an exposure period of thirty minutes or less. The MPE limits for persons in an Occupational/Controlled environment are shown in Table 2. The Occupational MPE is a function of transmit frequency and is for an exposure period of six minutes or less. The purpose of the analysis described in this report is to determine the power flux density levels of the earth station in the far-field, near-field, transition region, between the subreflector or feed and main reflector surface, at the main reflector surface, and between the antenna edge and the ground and to compare these levels to the specified MPEs.

Table 1. Limits for General Population/Uncontrolled Exposure (MPE)

Frequency Range (MHz)	Power Density (mW/cm ²)
30-300	0.2
300-1500	Frequency (MHz)*(0.8/1200)
1500-100,000	1.0

Table 2. Limits for Occupational/Controlled Exposure (MPE)

Frequency Range (MHz)	Power Density (mW/cm ²)
30-300	1.0
300-1500	Frequency (MHz)*(4.0/1200)
1500-100,000	5.0

Table 3. Formulas and Parameters Used for Determining Power Flux Densities

Parameter	Symbol	Formula	Value	Units
Antenna Diameter	D	Input	9.3	m
Antenna Surface Area	A _{surface}	$\pi D^2 / 4$	67.93	m ²
Subreflector Diameter	D _{sr}	Input	120.0	cm
Area of Subreflector	A _{sr}	$\pi D_{sr}^2 / 4$	11309.73	cm ²
Frequency	F	Input	6175	MHz
Wavelength	λ	300 / F	0.048583	m
Transmit Power	P	Input	78.30	W
Antenna Gain (dBi)	G _{es}	Input	53.9	dBi
Antenna Gain (factor)	G	10 ^{G_{es}/10}	245470.9	n/a
Pi	π	Constant	3.1415927	n/a
Antenna Efficiency	η	$G\lambda^2 / (\pi^2 D^2)$	0.68	n/a

1. Far Field Distance Calculation

The distance to the beginning of the far field can be determined from the following equation:

$$\begin{aligned} \text{Distance to the Far Field Region} \quad R_{ff} &= 0.60 D^2 / \lambda \\ &= 1068.2 \text{ m} \end{aligned} \quad (1)$$

The maximum main beam power density in the far field can be determined from the following equation:

$$\begin{aligned} \text{On-Axis Power Density in the Far Field} \quad S_{ff} &= G P / (4 \pi R_{ff}^2) \\ &= 1.341 \text{ W/m}^2 \\ &= 0.134 \text{ mW/cm}^2 \end{aligned} \quad (2)$$

2. Near Field Calculation

Power flux density is considered to be at a maximum value throughout the entire length of the defined Near Field region. The region is contained within a cylindrical volume having the same diameter as the antenna. Past the boundary of the Near Field region, the power density from the antenna decreases linearly with respect to increasing distance.

The distance to the end of the Near Field can be determined from the following equation:

$$\begin{aligned} \text{Extent of the Near Field} \quad R_{nf} &= D^2 / (4 \lambda) \\ &= 445.1 \text{ m} \end{aligned} \quad (3)$$

The maximum power density in the Near Field can be determined from the following equation:

$$\begin{aligned} \text{Near Field Power Density} \quad S_{nf} &= 16.0 \eta P / (\pi D^2) \\ &= 3.129 \text{ W/m}^2 \\ &= 0.313 \text{ mW/cm}^2 \end{aligned} \quad (4)$$

3. Transition Region Calculation

The Transition region is located between the Near and Far Field regions. The power density begins to decrease linearly with increasing distance in the Transition region. While the power density decreases inversely with distance in the Transition region, the power density decreases inversely with the square of the distance in the Far Field region. The maximum power density in the Transition region will not exceed that calculated for the Near Field region. The power density calculated in Section 1 is the highest power density the antenna can produce in any of the regions away from the antenna. The power density at a distance R_t can be determined from the following equation:

$$\begin{aligned} \text{Transition Region Power Density} \quad S_t &= S_{nf} R_{nf} / R_t \\ &= 0.313 \text{ mW/cm}^2 \end{aligned} \quad (5)$$

4. Region between the Main Reflector and the Subreflector

Transmissions from the feed assembly are directed toward the subreflector surface, and are reflected back toward the main reflector. The most common feed assemblies are waveguide flanges, horns or subreflectors. The energy between the subreflector and the reflector surfaces can be calculated by determining the power density at the subreflector surface. This can be determined from the following equation:

$$\begin{aligned} \text{Power Density at the Subreflector} \quad S_{sr} &= 4000 P / A_{sr} & (6) \\ &= 27.693 \text{ mW/cm}^2 \end{aligned}$$

5. Main Reflector Region

The power density in the main reflector is determined in the same manner as the power density at the subreflector. The area is now the area of the main reflector aperture and can be determined from the following equation:

$$\begin{aligned} \text{Power Density at the Main Reflector Surface} \quad S_{\text{surface}} &= 4 P / A_{\text{surface}} & (7) \\ &= 4.611 \text{ W/m}^2 \\ &= 0.461 \text{ mW/cm}^2 \end{aligned}$$

6. Region between the Main Reflector and the Ground

Assuming uniform illumination of the reflector surface, the power density between the antenna and the ground can be determined from the following equation:

$$\begin{aligned} \text{Power Density between Reflector and Ground} \quad S_g &= P / A_{\text{surface}} & (8) \\ &= 1.153 \text{ W/m}^2 \\ &= 0.115 \text{ mW/cm}^2 \end{aligned}$$

7. Summary of Calculations

Table 4. Summary of Expected Radiation levels for Uncontrolled Environment

Region	Calculated Maximum Radiation Power Density Level (mW/cm²)		Hazard Assessment
1. Far Field ($R_{ff} = 1068.2$ m)	S_{ff}	0.134	Satisfies FCC MPE
2. Near Field ($R_{nf} = 445.1$ m)	S_{nf}	0.313	Satisfies FCC MPE
3. Transition Region ($R_{nf} < R_t < R_{ff}$)	S_t	0.313	Satisfies FCC MPE
4. Between Main Reflector and Subreflector	S_{sr}	27.693	Potential Hazard
5. Main Reflector	$S_{surface}$	0.461	Satisfies FCC MPE
6. Between Main Reflector and Ground	S_g	0.115	Satisfies FCC MPE

Table 5. Summary of Expected Radiation levels for Controlled Environment

Region	Calculated Maximum Radiation Power Density Level (mW/cm²)		Hazard Assessment
1. Far Field ($R_{ff} = 1068.2$ m)	S_{ff}	0.134	Satisfies FCC MPE
2. Near Field ($R_{nf} = 445.1$ m)	S_{nf}	0.313	Satisfies FCC MPE
3. Transition Region ($R_{nf} < R_t < R_{ff}$)	S_t	0.313	Satisfies FCC MPE
4. Between Main Reflector and Subreflector	S_{sr}	27.693	Potential Hazard
5. Main Reflector	$S_{surface}$	0.461	Satisfies FCC MPE
6. Between Main Reflector and Ground	S_g	0.115	Satisfies FCC MPE

It is the applicant's responsibility to ensure that the public and operational personnel are not exposed to harmful levels of radiation.

8. Conclusions

Based on the above analysis it is concluded that harmful levels of radiation will not exist in regions normally occupied by the public or the earth station's operating personnel. The transmitter will be turned off during antenna maintenance so that the FCC MPE of 5.0 mW/cm² will be complied with for those regions with close proximity to the reflector that exceed acceptable levels.

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Allen Holdings, Inc
MARCHAFB, CA
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
March 12, 2015

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1. CONCLUSIONS

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the proposed earth station demonstrates that this site will operate satisfactorily with the common carrier microwave environment. Further, there will be no restrictions of its operation due to interference considerations.

2. SUMMARY OF RESULTS

A number of great circle interference cases were identified during the interference study of the proposed earth station. Each of the cases, which exceeded the interference objective on a line-of-sight basis, was profiled and the propagation losses estimated using NBS TN101 (Revised) techniques. The losses were found to be sufficient to reduce the signal levels to acceptable magnitudes in every case.

The following companies reported potential great circle interference conflicts that did not meet the objectives on a line-of-sight basis. When over-the-horizon losses are considered on the interfering paths, sufficient blockage exists to negate harmful interference from occurring with the proposed transmit-receive earth station.

Company

California, State of
Southern California Gas Company

No other carriers reported potential interference cases.

3. SUPPLEMENTAL SHOWING

Pursuant to Part 25.203(c) of the FCC Rules and Regulations, the satellite earth station proposed in this application was coordinated by Comsearch using computer techniques and in accordance with Part 25 of the FCC Rules and Regulations.

Coordination data for this earth station was sent to the below listed carriers with a letter dated 02/11/2015.

Company

ABC Holding Company Inc.
AT&T California
AirSites2000, LLC
American Tower, LLC
Anaheim City, of
BNSF Railway Company
CCO SoCal I, LLC
CNG Communications, Inc.
California, State of
Calvary Chapel of Costa Mesa
Cellco Partnership - California
City of Los Angeles Dept Water & Power
Coachella Valley Water District
Coast Community College District
DRS Technical Services
Entravision Holdings, LLC
Glendale, City of
ION Media Los Angeles License, Inc.
KTLA, LLC
LOS ANGELES UNIFIED SCHOOL DISTRICT
Los Angeles City Info Technology Agency
Los Angeles County Dept of Public Works
Los Angeles County FCC Licensing Section
Los Angeles County Metro Transit Auth
Los Angeles SMSA Ltd. Partnership
MHO Networks
MOBILE RELAY ASSOCIATES INC
MONTEBELLO CITY CALIFORNIA
Metropolitan Water Dist of So California
NRJ TV LA License Co, LLC
New Cingular Wireless PCS - Los Angeles
New Cingular Wireless PCS LLC -San Diego
Nextel of California Inc.
Norris, Samuel O
Orange, County of, CA
QUALCOMM INC.
Regional 3Cs
Riverside, County of
San Bernardino County of California
San Diego Broadband
San Diego County Water Authority

San Diego Gas & Electric Company
San Diego, City of
San Diego, County of
Skyriver Communications
Southern California Edison Company
Southern California Gas Company
Southern California Regional Rail Auth.
Station Venture Operations, LP
T-Mobile License LLC
TV MICROWAVES CO
Turn Wireless, LLC
Ultimate Internet Access, Inc
Union Pacific Railroad Company
University of California, HPWREN
Verizon California Inc.
Verizon Wireless (VAW) LLC (Southern CA)
Western Technical Services
White, Fred K

4. EARTH STATION COORDINATION DATA

This section presents the data pertinent to frequency coordination of the proposed earth station that was circulated to all carriers within its coordination contours.

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Date: 03/12/2015
Job Number: 150211COMSTC06

Administrative Information

Call Sign E000232
Licensee Name Allen Holdings, Inc

Site Information

MARCHAFB, CA

Latitude (NAD 83) 33° 54' 21.7" N
Longitude (NAD 83) 117° 14' 57.8" W
Climate Zone A
Rain Zone 4
Ground Elevation (AMSL) 468.5 m / 1537.1 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Digital
Satellite Arc 194° W to 194° West Longitude
Azimuth Range 262.5° to 262.5°
Corresponding Elevation Angles 2.3° / 2.3°
Antenna Centerline (AGL) 5.49 m / 18.0 ft

Antenna Information

Receive - A40931

Transmit - A60931

Manufacturer	COMMSCOPE	COMMSCOPE
Model	ESA9.3-46	ESA9.3-46
Gain / Diameter	50.7 dBi / 9.3 m	53.9 dBi / 9.3 m
3-dB / 15-dB Beamwidth	0.52° / 1.00°	0.30° / 0.60°

Max Available RF Power	(dBW/4 kHz)	1M23G7W - 36M0G7W			
	(dBW/MHz)	-20.6	-20.6		
Maximum EIRP	(dBW/4 kHz)	3.4	3.4		
	(dBW/MHz)	33.3	33.3		
	(dBW)	57.3	57.3		
Interference Objectives:	Long Term	72.8	58.2		
	Short Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
		-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%

Frequency Information

Receive 4.0 GHz

Transmit 6.1 GHz

Emission / Frequency Range (MHz) 1M23G7W - 36M0G7W / 3842.0 - 3878.0 1M23G7W - 36M0G7W / 6067.0 - 6103.0

Max Great Circle Coordination Distance 799.5 km / 496.8 mi 315.6 km / 196.1 mi
Precipitation Scatter Contour Radius 508.2 km / 315.7 mi 100.0 km / 62.1 mi

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values

MARCHAFB, CA

Licensee Name Allen Holdings, Inc
Latitude (NAD 83) 33° 54' 21.7" N
Longitude (NAD 83) 117° 14' 57.8" W
Ground Elevation (AMSL) 468.5 m / 1537.1 ft
Antenna Centerline (AGL) 5.49 m / 18.0 ft
Antenna Model Commscope ESA9.3-46
Antenna Mode Receive 4.0 GHz Transmit 6.1 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20% -154.0 dBW/4 kHz 20%
Short Term -146.0 dBW/MHz 0.01% -131.0 dBW/4 kHz 0.0025%
Max Available RF Power -20.6 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz		Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.81	97.48	-10.30	228.91	-10.10	100.00
5	1.80	102.48	-10.30	198.67	-10.10	100.00
10	0.92	107.48	-10.30	222.99	-10.10	100.00
15	1.14	112.48	-11.79	207.40	-11.59	100.00
20	2.69	117.48	-14.29	155.26	-15.09	100.00
25	3.04	122.48	-15.30	143.31	-17.10	100.00
30	2.35	127.48	-15.30	158.14	-17.10	100.00
35	1.92	132.48	-15.30	170.82	-17.10	100.00
40	1.83	137.48	-15.30	173.63	-17.10	100.00
45	1.52	142.48	-15.30	182.86	-17.10	100.00
50	0.90	147.46	-15.30	203.06	-17.10	100.00
55	0.62	152.44	-15.30	214.70	-17.10	100.00
60	0.54	157.42	-15.30	219.21	-17.10	100.00
65	0.81	162.43	-15.30	205.06	-17.10	100.00
70	0.92	167.41	-15.30	202.18	-17.10	100.00
75	0.51	172.28	-13.93	227.54	-15.27	100.00
80	0.00	176.61	-11.66	274.97	-12.13	110.12
85	0.00	176.63	-11.65	275.02	-12.12	110.15
90	0.00	172.18	-13.99	261.16	-15.36	102.12
95	0.57	167.40	-15.30	217.26	-17.10	100.00
100	0.76	162.45	-15.30	207.46	-17.10	100.00
105	0.61	157.46	-15.30	215.55	-17.10	100.00
110	1.14	152.49	-15.30	194.23	-17.10	100.00
115	1.93	147.51	-15.30	170.68	-17.10	100.00
120	2.38	142.51	-15.30	157.42	-17.10	100.00
125	2.57	137.51	-15.30	153.22	-17.10	100.00
130	1.77	132.51	-15.30	175.44	-17.10	100.00
135	0.76	127.50	-15.30	207.54	-17.10	100.00
140	0.00	122.49	-15.30	253.82	-17.10	100.00
145	0.00	117.49	-14.30	259.43	-15.09	102.76
150	0.00	112.50	-11.80	274.10	-11.60	111.47
155	0.00	107.50	-10.30	283.38	-10.10	115.27
160	0.00	102.51	-10.30	283.38	-10.10	115.27
165	0.00	97.51	-10.30	283.38	-10.10	115.27
170	0.00	92.51	-10.30	283.38	-10.10	115.27
175	0.00	87.52	-10.30	283.38	-10.10	115.27
180	0.00	82.52	-10.30	283.38	-10.10	115.27
185	0.00	77.53	-10.30	283.38	-10.10	115.27

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values

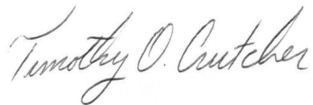
MARCHAFB, CA

Licensee Name	Allen Holdings, Inc			
Latitude (NAD 83)	33° 54' 21.7" N			
Longitude (NAD 83)	117° 14' 57.8" W			
Ground Elevation (AMSL)	468.5 m / 1537.1 ft			
Antenna Centerline (AGL)	5.49 m / 18.0 ft			
Antenna Model	Commscope ESA9.3-46			
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz	
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power			-20.6 (dBW/4 kHz)	

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz		Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	72.53	-10.30	283.38	-10.10	115.27
195	0.27	67.53	-10.30	274.87	-10.10	109.79
200	0.55	62.53	-10.30	245.03	-10.10	100.00
205	0.48	57.53	-10.30	250.23	-10.10	100.00
210	0.44	52.54	-10.30	255.17	-10.10	100.00
215	0.56	47.54	-9.81	246.81	-9.61	100.00
220	0.56	42.54	-8.32	256.12	-8.61	100.00
225	0.55	37.55	-6.81	266.00	-7.12	100.00
230	0.50	32.56	-5.81	276.03	-5.61	103.16
235	0.51	27.57	-5.30	278.46	-5.10	103.85
240	0.54	22.58	-5.30	276.42	-5.10	102.51
245	0.60	17.59	-3.37	285.21	-3.17	104.72
250	0.66	12.62	1.08	314.45	1.28	113.95
255	0.74	7.67	7.36	359.83	7.23	127.21
260	0.77	2.93	16.97	445.73	17.17	160.02
265	0.73	2.93	17.00	799.55	17.20	315.65
270	0.72	7.64	7.41	361.81	7.26	128.26
275	0.54	12.60	1.10	323.51	1.30	119.64
280	0.33	17.59	-3.37	314.34	-3.17	122.86
285	0.22	22.57	-5.30	314.31	-5.10	126.29
290	0.00	27.57	-5.30	317.55	-5.10	128.30
295	0.00	32.56	-5.81	313.95	-5.61	126.95
300	0.00	37.54	-6.81	306.39	-7.12	122.98
305	0.23	42.52	-8.31	292.85	-8.60	116.97
310	0.00	47.53	-9.81	286.52	-9.61	116.54
315	0.00	52.52	-10.30	283.38	-10.10	115.27
320	0.22	57.51	-10.30	280.70	-10.10	113.56
325	0.58	62.50	-10.30	243.20	-10.10	100.00
330	2.92	67.49	-10.30	171.83	-10.10	100.00
335	3.88	72.49	-10.30	148.94	-10.10	100.00
340	2.69	77.49	-10.30	177.22	-10.10	100.00
345	1.57	82.49	-10.30	204.67	-10.10	100.00
350	0.61	87.49	-10.30	240.79	-10.10	100.00
355	0.56	92.48	-10.30	243.95	-10.10	100.00

5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



Timothy O. Crutcher
Frequency Planner
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: March 12, 2015

WAIVER REQUEST

Allen Holdings, Inc. d/b/a Allen Communications seeks a waiver of the minimum angle of antenna elevation requirements in §25.205(a).

E000232 provides service to the Defense Media Center (“DMC”) located at March AFB. E000232 provides Armed Forces Radio (“AFR”) and Armed Forces Television (“AFT”) to U.S. Military installations throughout the Pacific Rim. Due to operational and budgetary changes, DMC is temporarily required to change the satellite it uses to distribute AFR and AFT.

As demonstrated in the attached Interference Case Summary, transmissions at the requested levels will not cause any interference.

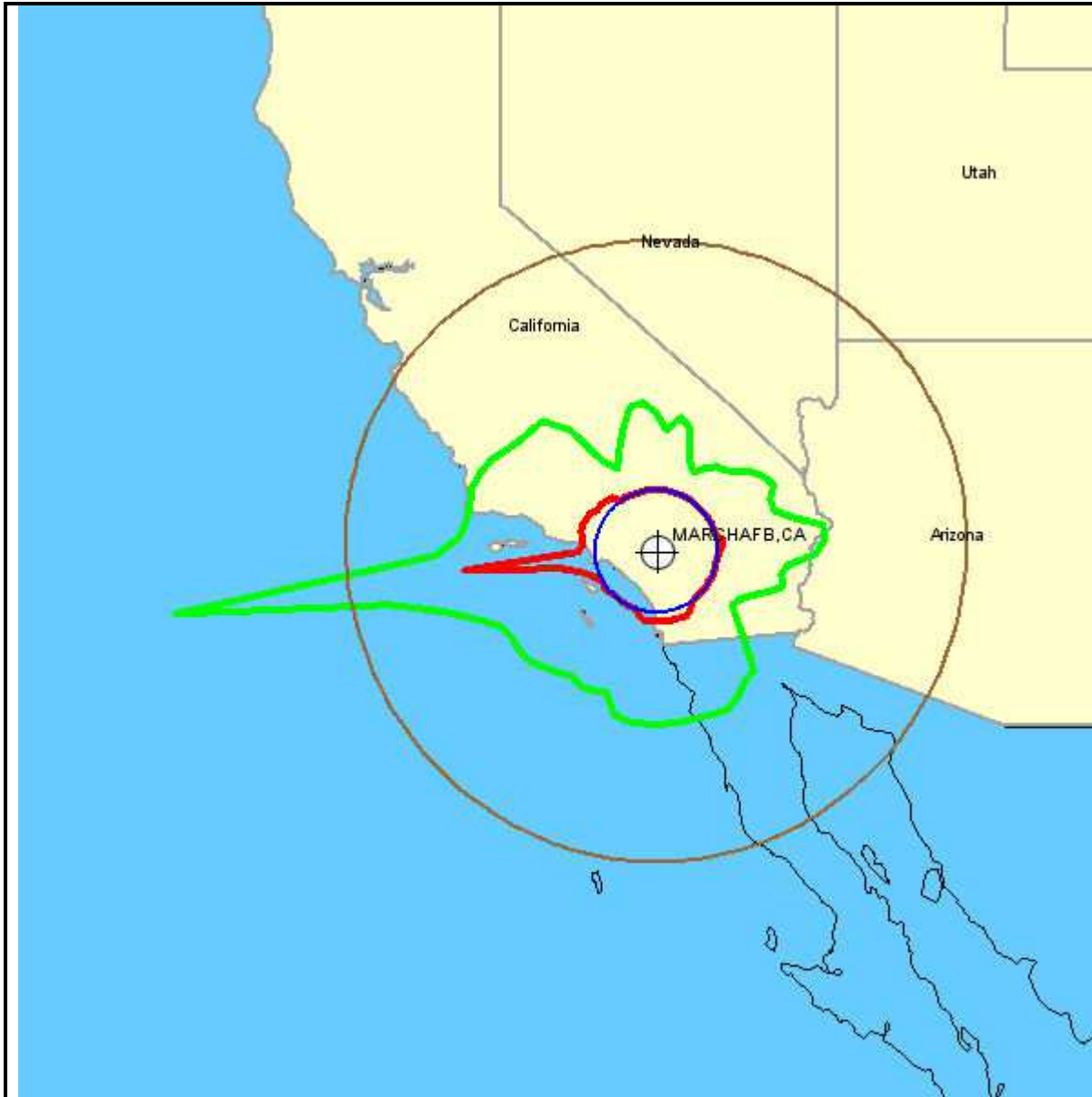
Table
Interference Case Summary – Case between 258 and 266 Degrees
MARCHAFB, CALIFORNIA

Case #	Path ID	Band (GHz)	Distance (km)	Azimuth (°)	ES Disc (°)	ES Gain (dBi)	LOS Loss Required (dB)	OH Loss 20% (dB)	OH Loss 0.01% (dB)	Revised Margin 20% (dB)	Revised Margin 0.01% (dB)	Center Freq MHz
2	PALOS VERDE ANAHEIM	6.1	102.2	260.4	2.9	17.2	24.5	59.4	10.9	CLEAR	CLEAR	6315.84
3	BUENA VISTA BOX SPRING N	6.1	30.7	264.4	2.9	17.2	21.2	67.4	33.2	CLEAR	CLEAR	6345.49
4	SIERRA PK GEP	6.1	37.9	260.7	2.9	17.2	19.6	14.0	5.8	5.6	CLEAR	5974.85
7	SIGNAL HILL ANAHEIM PAS	6.1	85.4	262.3	2.9	17.2	18.2	59.4	8.0	CLEAR	CLEAR	6315.84
23	YORBA LIN 2 SIERRA PEAK	6.1	53.0	264.4	2.9	17.2	12.1	63.3	10.6	CLEAR	CLEAR	6197.24
30	SIERRA PEAK ARC	6.1	37.9	260.7	2.9	17.2	7.6	14.4	6.2	CLEAR	CLEAR	6123.24
32	ANAHEIM YORBA LINDA	6.1	62.5	262.5	2.9	17.2	7.6	61.2	50.1	CLEAR	CLEAR	6226.89
36	ANAHEIM PAS ANAHEIM	6.1	60.6	259.2	3.7	15.5	5.5	58.9	47.7	CLEAR	CLEAR	6315.84
41	SIERRA PEAK COLTON	6.1	37.9	260.6	2.9	17.2	2.2	13.6	5.4	CLEAR	CLEAR	6063.80
43	SIERRA PEAK COLTON	6.1	37.9	260.6	2.9	17.2	2.2	13.6	5.4	CLEAR	CLEAR	5945.20
44	SIERRA PEAK COLTON	6.1	37.9	260.6	2.9	17.2	2.2	14.1	5.9	CLEAR	CLEAR	6034.15
45	SIERRA PEAK COLTON	6.1	37.9	260.6	2.9	17.2	2.2	13.6	5.4	CLEAR	CLEAR	6093.45
46	SIERRA PEAK COLTON	6.1	37.9	260.6	2.9	17.2	2.2	14.1	5.9	CLEAR	CLEAR	6152.75
59	SEAL BEACH LA PALMA	6.1	79.1	258.1	4.7	13.5	-0.9	57.3	46.2	CLEAR	CLEAR	6004.50
63	SAN PEDRO HI MT LEE	6.1	102.2	260.4	2.9	17.2	-2.8	59.5	12.0	CLEAR	CLEAR	6423.75
64	SEAL BEACH HUNTINGTN BCH	6.1	79.1	258.1	4.7	13.5	-3.0	57.3	46.2	CLEAR	CLEAR	5945.20
66	SERRANO SUB SANTIAGO PK	6.1	50.7	260.4	2.9	17.2	-3.3	77.8	26.8	CLEAR	CLEAR	6375.14
71	SIERRA PEAK HEAPS PEAK	6.1	37.8	260.6	2.9	17.2	-3.9	14.6	6.5	CLEAR	CLEAR	6004.50

All cases clear with OH loss or frequency separation

Antenna Type: Commscope ESA9.3-46
Uplink Power: -20.6 dBW/4 kHz
Satellite Arc: 194.0 W to 194.0 W
Objectives: Long Term: -154.0 dBW/4 kHz Short Term: -131.0 dBW/4 kHz

Allen Holdings, Inc



Legend:

Scale: 1:11,000,000

Great Circle: 6.1 GHz 

4.0 GHz 

Precipitation Scatter: 6.1 GHz 

4.0 GHz 

Earth Station Site: 



COMSEARCH®
19700 Janelia Farm Boulevard
Ashburn, VA 20147



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ASR

(Antenna Structure Registration)

FCC E-Filing Systems

(FCC Electronic filing Systems)

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Confirmation

Thank you for your submission. Please make a note of your confirmation number: IB2015000653

The following information was submitted with this Pleading:

Type of Pleading

LETTER

Date

04/08/2015

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Proceedings List

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SES-MOD-20150401-00187	E000232	Allen Holdings, Inc. d/b/a Allen Communications

Non-Confidential Attachment(s)

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April 8, 2015

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International Bureau
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, DC 20554

**Re: Earth Station E000232
Modification Application SES-MOD-20150401-00187
Amendment**

Dear Sir or Madam:

On behalf of Allen Holdings, Inc., d/b/a Allen Communications, licensee of earth station E000232, we hereby amend the satellite name from "Permitted List" to Intelsat 19 (ISS-19) at 194 degrees W/166 degrees E in the above-referenced modification application. In addition, the downlink frequencies should be corrected in E43/44, E50, E52/53 to 3842-3878 MHz in the above-referenced modification application.

Should any questions arise concerning this amendment, please communicate with this office.

Very truly yours,



Frank R. Jazzo
Counsel for Allen Holdings, Inc.,
d/b/a Allen Communications