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. Prior Coordination for an application to modify the license for E000232 is complete (see attached) and the application is being prepared. Accordingly, an extension of the special temporary authority ("STA") is hereby requested to permit continuity of AFR and AFT service throughout the Pacific Rim.

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°	
				1M23G7W - 36M0G7W	
Max Available RF Power	(dBW/4 kHz)			-20.6	-20.6
	(dBW/MHz)			3.4	3.4
Maximum EIRP	(dBW/4 kHz)			33.3	33.3
	(dBW/MHz)			57.3	57.3
	(dBW)			72.8	58.2
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%

Frequency Information	Receive 4.0 GHz	Transmit 6.1 GHz
Emission / Frequency Range (MHz)	1M23G7W - 36M0G7W / 3482.0 - 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)	

			Receive 4.0 GHz		Transmit 6.1 GHz	
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	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

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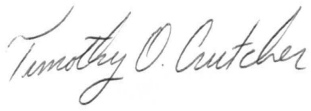
Coordination Values	**MARCHAFB, CA**			
Licensee Name	Allen Holdings, Inc			
Latitude (NAD 83)	33° 54' 21.7" N			
Longitude (NAD 83)	117° 14' 57.8" W			
Ground Elevation (AMSL)	468.5 m / 1537.1 ft			
Antenna Centerline (AGL)	5.49 m / 18.0 ft			
Antenna Model	Commscope ESA9.3-46			
Antenna Mode	Receive 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)	

			Receive 4.0 GHz		Transmit 6.1 GHz	
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	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

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	$10^{Ges/10}$	245470.9	n/a
Pi	π	Constant	3.1415927	n/a
Antenna Efficiency	η	$G\lambda^2/(\pi^2D^2)$	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:

Distance to the Far Field Region

$$R_{ff} = 0.60\ D^2 / \lambda \quad (1)$$
$$= 1068.2\ \text{m}$$

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

On-Axis Power Density in the Far Field

$$S_{ff} = G\ P / (4\ \pi\ R_{ff}^{\ 2}) \quad (2)$$
$$= 1.341\ \text{W/m}^2$$
$$= 0.134\ \text{mW/cm}^2$$

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:

Extent of the Near Field

$$R_{nf} = D^2 / (4\ \lambda) \quad (3)$$
$$= 445.1\ \text{m}$$

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

Near Field Power Density

$$S_{nf} = 16.0\ \eta\ P / (\pi\ D^2) \quad (4)$$
$$= 3.129\ \text{W/m}^2$$
$$= 0.313\ \text{mW/cm}^2$$

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:

Transition Region Power Density

$$S_t = S_{nf}\ R_{nf} / R_t \quad (5)$$
$$= 0.313\ \text{mW/cm}^2$$

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:

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

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:

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

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:

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

7. Summary of Calculations

Table 4. Summary of Expected Radiation levels for Uncontrolled Environment

Region		Calculated Maximum Radiation Power Density Level (mW/cm^2)	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/cm^2)	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.

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	HUNTNGTN 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