

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Exxon Communications Company
EXXON DIANA, Gulf of Mexico
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
August 28, 2012

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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

No great circle interference cases were identified during the interference study of the proposed earth station.

No 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 08/14/2012.

<u>Company</u>
Comsearch

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: 08/28/2012
Job Number: 120814COMSGE01

Administrative Information

Status ENGINEER PROPOSAL
Call Sign E000001
Licensee Code S03230
Licensee Name Exxon Communications Company

Site Information

EXXON DIANA, GM

Venue Name
Latitude (NAD 83) 26° 56' 20.8" N
Longitude (NAD 83) 94° 41' 20.0" W
Climate Zone B
Rain Zone 2
Ground Elevation (AMSL) 0.3 m / 1.0 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Analog
Satellite Arc 57° W to 150° West Longitude
Azimuth Range 120.4° to 252.6°
Corresponding Elevation Angles 38.0° / 22.5°
Antenna Centerline (AGL) 62.79 m / 206.0 ft

Antenna Information

Receive - FCC32**Transmit - FCC32**

Manufacturer	SeaTel	SeaTel	
Model	9797	9797	
Gain / Diameter	38.5 dBi / 2.4 m	41.4 dBi / 2.4 m	
3-dB / 15-dB Beamwidth	2.40° / 4.20°	1.46° / 2.80°	
Max Available RF Power (dBW/4 kHz)		-23.0	
(dBW/MHz)		1.0	
Maximum EIRP (dBW/4 kHz)		18.4	
(dBW/MHz)		42.4	
Interference Objectives:	Long Term	-164.0 dBW/MHz 20%	-154.0 dBW/4 kHz 20%
	Short Term	-154.0 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)	308KG7W - 4M16G7D / 3700.0 - 4200.0	308KG7W - 4M16G7D / 5925.0 - 6425.0
Max Great Circle Coordination Distance	667.3 km / 414.6 mi	142.9 km / 88.8 mi
Precipitation Scatter Contour Radius	509.8 km / 316.7 mi	100.0 km / 62.1 mi

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Coordination Values

EXXON DIANA, GM

Licensee Name Exxon Communications Company
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Ground Elevation (AMSL) 0.3 m / 1.0 ft
Antenna Centerline (AGL) 62.79 m / 206.0 ft
Antenna Model SeaTel 2.4 Meter
Antenna Mode Receive 4.0 GHz Transmit 6.1 GHz
Interference Objectives: Long Term -164.0 dBW/MHz 20% -154.0 dBW/4 kHz 20%
Short Term -154.0 dBW/MHz 0.01% -131.0 dBW/4 kHz 0.0025%
Max Available RF Power -23.0 (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	0.00	106.05	-10.00	523.98	-10.00	116.91
5	0.00	109.74	-10.00	523.98	-10.00	116.91
10	0.00	105.93	-10.00	523.98	-10.00	116.91
15	0.00	102.07	-10.00	523.98	-10.00	116.91
20	0.00	98.17	-10.00	523.98	-10.00	116.91
25	0.00	94.24	-10.00	523.98	-10.00	116.91
30	0.00	90.31	-10.00	523.98	-10.00	116.91
35	0.00	86.37	-10.00	523.98	-10.00	116.91
40	0.00	82.44	-10.00	523.98	-10.00	116.91
45	0.00	78.54	-10.00	523.98	-10.00	116.91
50	0.00	74.67	-10.00	523.98	-10.00	116.91
55	0.00	70.85	-10.00	523.98	-10.00	116.91
60	0.00	67.09	-10.00	523.98	-10.00	116.91
65	0.00	63.42	-10.00	523.98	-10.00	116.91
70	0.00	59.85	-10.00	523.98	-10.00	116.91
75	0.00	56.41	-10.00	523.98	-10.00	116.91
80	0.00	53.13	-10.00	523.98	-10.00	116.91
85	0.00	50.05	-10.00	523.98	-10.00	116.91
90	0.00	47.20	-9.85	526.39	-9.85	117.31
95	0.00	44.63	-9.24	536.10	-9.24	118.91
100	0.00	42.41	-8.69	545.12	-8.69	120.43
105	0.00	40.58	-8.21	553.01	-8.21	121.77
110	0.00	39.21	-7.84	559.23	-7.84	122.84
115	0.00	38.35	-7.59	563.29	-7.59	123.55
120	0.00	38.03	-7.50	564.84	-7.50	123.82
125	0.00	38.26	-7.57	563.71	-7.57	123.62
130	0.00	39.04	-7.79	560.01	-7.79	122.98
135	0.00	40.34	-8.14	554.10	-8.14	121.96
140	0.00	42.09	-8.61	546.44	-8.61	120.65
145	0.00	44.26	-9.15	537.56	-9.15	119.16
150	0.00	46.78	-9.75	527.93	-9.75	117.56
155	0.00	49.58	-10.00	523.98	-10.00	116.91
160	0.00	52.50	-10.00	523.98	-10.00	116.91
165	0.00	55.00	-10.00	523.98	-10.00	116.91
170	0.00	56.91	-10.00	523.98	-10.00	116.91
175	0.00	58.12	-10.00	523.98	-10.00	116.91
180	0.00	58.54	-10.00	523.98	-10.00	116.91
185	0.00	58.12	-10.00	523.98	-10.00	116.91

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Coordination Values

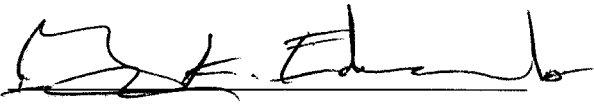
EXXON DIANA, GM

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Antenna Model	SeaTel 2.4 Meter			
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz	
Interference Objectives: Long Term	-164.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
Short Term	-154.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power			-23.0 (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	56.91	-10.00	523.98	-10.00	116.91
195	0.00	55.00	-10.00	523.98	-10.00	116.91
200	0.00	52.50	-10.00	523.98	-10.00	116.91
205	0.00	49.55	-10.00	523.98	-10.00	116.91
210	0.00	46.23	-9.62	529.94	-9.62	117.89
215	0.00	42.65	-8.75	544.12	-8.75	120.26
220	0.00	38.85	-7.73	560.92	-7.73	123.14
225	0.00	35.00	-6.60	580.24	-6.60	126.53
230	0.00	31.43	-5.43	600.82	-5.43	130.24
235	0.00	28.24	-4.27	621.88	-4.27	134.14
240	0.00	25.58	-3.20	641.24	-3.20	137.91
245	0.00	23.64	-2.34	657.64	-2.34	141.05
250	0.00	22.60	-1.85	667.17	-1.85	142.89
255	0.00	22.58	-1.84	667.35	-1.84	142.92
260	0.00	23.59	-2.32	658.11	-2.32	141.14
265	0.00	25.50	-3.16	641.90	-3.16	138.03
270	0.00	28.14	-4.23	622.61	-4.23	134.27
275	0.00	31.31	-5.39	601.56	-5.39	130.38
280	0.00	34.87	-6.56	580.95	-6.56	126.66
285	0.00	38.72	-7.70	561.53	-7.70	123.24
290	0.00	42.77	-8.78	543.60	-8.78	120.17
295	0.00	46.97	-9.80	527.20	-9.80	117.44
300	0.00	51.29	-10.00	523.98	-10.00	116.91
305	0.00	55.69	-10.00	523.98	-10.00	116.91
310	0.00	60.15	-10.00	523.98	-10.00	116.91
315	0.00	64.66	-10.00	523.98	-10.00	116.91
320	0.00	69.21	-10.00	523.98	-10.00	116.91
325	0.00	73.78	-10.00	523.98	-10.00	116.91
330	0.00	78.38	-10.00	523.98	-10.00	116.91
335	0.00	82.99	-10.00	523.98	-10.00	116.91
340	0.00	87.61	-10.00	523.98	-10.00	116.91
345	0.00	92.23	-10.00	523.98	-10.00	116.91
350	0.00	96.85	-10.00	523.98	-10.00	116.91
355	0.00	101.46	-10.00	523.98	-10.00	116.91

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.

BY: 

Gary K. Edwards
Senior Manager
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: August 28, 2012