FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

ENTERPRISE PRODUCTS OPERATING LLC
TENESEE GULF, MISSISSIPPI

Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Virginia 20147
March 18, 2011

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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 based upon the restrictions noted in the Summary of Results (Section 2).

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 and frequency offset are considered on the interfering paths, sufficient losses exist to negate harmful interference from occurring with the proposed transmit-receive earth station. Further, the receive spectrum will be limited to frequencies 3922 to 3942 MHz, and the transmit spectrum will be limited to frequencies 6147 to 6167 MHz.

Company

None

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.

Expedited coordination data for this earth station was sent to the below listed carriers with a letter dated March 7, 2011.

Company

ALLTEL Communications, LLC
ALLTEL New License Sub LLC
AT&T COMM. OF THE SOUTH CENTRAL STATES
Alabama State Port Authority
BAY SPRINGS TELEPHONE COMPANY INC
Bell Atlantic Mobile Allentown-Verizon W
COMNET, INC. c/o TECNET
Cellular South Licenses, Inc.
Celutel, Inc.
CenturyTel of Alabama, LLC.
GTE Mobilnet of South Texas LP
Louisiana RSA #7 Cell Gen Partnership
MCI Communications Services Inc.
METROPOLITAN AREA NETWORKS, INC.
MISSISSIPPI STATE DEPT OF TRANSPORTATION
Mississippi Authority for ED TV
Mobile, County of
NEW ORLEANS EDUCATIONAL TELECOMM
New Cingular Wireless PCS LLC - AL, MS,
New Cingular Wireless PCS, LLC - LA, GM
Open Range Communications
PowerSouth Energy Cooperative
SOUTH MISSISSIPPI ELECTRIC POWER ASSOC
Sprint Spectrum LP DBA Sprint PCS
State of Mississippi Wireless Communicat
Texas Eastern Communications, Inc.
Verizon Wireless Personal Comm LP-LA/MS
Zodiac Newco, LLC

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:	03/18/2011
Job Number:	110307COMSJC15

Administrative Information

Status	ENGINEER PROPOSAL
Call Sign	
Licensee Code	ENPROD
Licensee Name	ENTERPRISE PRODUCTS OPERATING LLC

Site Information — TENESEE GULF, MISSISSIPPI

Venue Name	
Latitude (NAD 83)	31° 22' 54.2" N
Longitude (NAD 83)	89° 10' 36.1" W
Climate Zone	B
Rain Zone	1
Ground Elevation (AMSL)	88.09 m / 289.0 ft

Link Information

Satellite Type	Geostationary
Mode	TR - Transmit-Receive
Modulation	Digital
Satellite Arc	72° W to 87° West Longitude
Azimuth Range	149.3° to 175.8°
Corresponding Elevation Angles	49.0° / 53.4°
Antenna Centerline (AGL)	2.74 m / 9.0 ft

Antenna Information		Receive		Transmit	
Manufacturer		Andrew Corporation		Andrew Corporation	
Model		2.4 Meter		2.4 Meter	
Gain / Diameter		38.0 dBi / 2.4 m		42.0 dBi / 2.4 m	
3-dB / 15-dB Beamwidth		2.20° / 3.90°		1.30° / 2.50°	
Max Available RF Power	(dBW/4 kHz)			-14.1	
	(dBW/MHz)			9.9	
Maximum EIRP	(dBW/4 kHz)			27.9	
	(dBW/MHz)			51.9	
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)	205KG7W - 512KG7W / 3922.0 - 3942.0	205KG7W - 512KG7W / 6147.0 - 6167.0
Max Great Circle Coordination Distance	412.2 km / 256.1 mi	145.7 km / 90.5 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi	100.0 km / 62.1 mi

COMSEARCH

Earth Station Data Sheet

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Coordination Values	**TENESEE GULF, MS**			
Licensee Name	ENTERPRISE PRODUCTS OPERATING LLC			
Latitude (NAD 83)	31° 22' 54.2" N			
Longitude (NAD 83)	89° 10' 36.1" W			
Ground Elevation (AMSL)	88.09 m / 289.0 ft			
Antenna Centerline (AGL)	2.74 m / 9.0 ft			
Antenna Model	Andrew Corporation 2.4 Meter			
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			-14.1 (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	0.00	124.38	-10.00	412.20	-10.00	145.67
5	0.00	122.23	-10.00	412.20	-10.00	145.67
10	0.00	119.86	-10.00	412.20	-10.00	145.67
15	0.00	117.30	-10.00	412.20	-10.00	145.67
20	0.00	114.58	-10.00	412.20	-10.00	145.67
25	0.00	111.72	-10.00	412.20	-10.00	145.67
30	0.00	108.75	-10.00	412.20	-10.00	145.67
35	0.00	105.68	-10.00	412.20	-10.00	145.67
40	0.00	102.54	-10.00	412.20	-10.00	145.67
45	0.00	99.34	-10.00	412.20	-10.00	145.67
50	0.00	96.10	-10.00	412.20	-10.00	145.67
55	0.00	92.83	-10.00	412.20	-10.00	145.67
60	0.00	89.55	-10.00	412.20	-10.00	145.67
65	0.00	86.27	-10.00	412.20	-10.00	145.67
70	0.00	83.00	-10.00	412.20	-10.00	145.67
75	0.00	79.77	-10.00	412.20	-10.00	145.67
80	0.00	76.58	-10.00	412.20	-10.00	145.67
85	0.00	73.46	-10.00	412.20	-10.00	145.67
90	0.00	70.42	-10.00	412.20	-10.00	145.67
95	0.00	67.47	-10.00	412.20	-10.00	145.67
100	0.00	64.65	-10.00	412.20	-10.00	145.67
105	0.00	61.97	-10.00	412.20	-10.00	145.67
110	0.00	59.46	-10.00	412.20	-10.00	145.67
115	0.00	57.15	-10.00	412.20	-10.00	145.67
120	0.00	55.07	-10.00	412.20	-10.00	145.67
125	0.00	53.24	-10.00	412.20	-10.00	145.67
130	0.00	51.70	-10.00	412.20	-10.00	145.67
135	0.00	50.48	-10.00	412.20	-10.00	145.67
140	0.00	49.61	-10.00	412.20	-10.00	145.67
145	0.00	49.09	-10.00	412.20	-10.00	145.67
150	0.00	48.96	-10.00	412.20	-10.00	145.67
155	0.00	49.20	-10.00	412.20	-10.00	145.67
160	0.00	49.81	-10.00	412.20	-10.00	145.67
165	0.00	50.79	-10.00	412.20	-10.00	145.67
170	0.00	52.09	-10.00	412.20	-10.00	145.67
175	0.00	53.11	-10.00	412.20	-10.00	145.67
180	0.00	53.49	-10.00	412.20	-10.00	145.67
185	0.00	53.92	-10.00	412.20	-10.00	145.67

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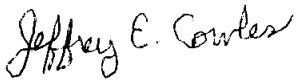
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz	
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power			-14.1 (dBW/4 kHz)	

			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	54.66	-10.00	412.20	-10.00	145.67
195	0.00	55.70	-10.00	412.20	-10.00	145.67
200	0.00	57.03	-10.00	412.20	-10.00	145.67
205	0.00	58.61	-10.00	412.20	-10.00	145.67
210	0.00	60.42	-10.00	412.20	-10.00	145.67
215	0.00	62.45	-10.00	412.20	-10.00	145.67
220	0.00	64.67	-10.00	412.20	-10.00	145.67
225	0.00	67.04	-10.00	412.20	-10.00	145.67
230	0.00	69.56	-10.00	412.20	-10.00	145.67
235	0.00	72.20	-10.00	412.20	-10.00	145.67
240	0.00	74.94	-10.00	412.20	-10.00	145.67
245	0.00	77.75	-10.00	412.20	-10.00	145.67
250	0.00	80.64	-10.00	412.20	-10.00	145.67
255	0.00	83.57	-10.00	412.20	-10.00	145.67
260	0.00	86.53	-10.00	412.20	-10.00	145.67
265	0.00	89.51	-10.00	412.20	-10.00	145.67
270	0.00	92.49	-10.00	412.20	-10.00	145.67
275	0.00	95.46	-10.00	412.20	-10.00	145.67
280	0.00	98.40	-10.00	412.20	-10.00	145.67
285	0.00	101.30	-10.00	412.20	-10.00	145.67
290	0.00	104.14	-10.00	412.20	-10.00	145.67
295	0.00	106.90	-10.00	412.20	-10.00	145.67
300	0.00	109.58	-10.00	412.20	-10.00	145.67
305	0.00	112.14	-10.00	412.20	-10.00	145.67
310	0.00	114.56	-10.00	412.20	-10.00	145.67
315	0.00	116.83	-10.00	412.20	-10.00	145.67
320	0.00	118.93	-10.00	412.20	-10.00	145.67
325	0.00	120.82	-10.00	412.20	-10.00	145.67
330	0.00	122.48	-10.00	412.20	-10.00	145.67
335	0.00	123.89	-10.00	412.20	-10.00	145.67
340	0.00	125.03	-10.00	412.20	-10.00	145.67
345	0.00	125.87	-10.00	412.20	-10.00	145.67
350	0.00	126.40	-10.00	412.20	-10.00	145.67
355	0.00	126.28	-10.00	412.20	-10.00	145.67

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.



Jeffrey E. Cowles
Engineer III, Telecommunications
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Va. 20147

DATED: March 18, 2011