FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

CSC
Ft. Meade, Maryland
(Call Sign: E920590)

Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Virginia 20147
December 9, 2010

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1. CONCLUSIONS

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the existing 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 existing 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 most cases.

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 separation are considered on the interfering paths, sufficient losses exist to negate harmful interference from occurring with the existing transmit-receive earth station. Further, the transmit spectrum will be limited to frequencies 5925.0 to 6077.45 MHz, 6109.45 to 6240.54 MHz, 6272.54 to 6388.79 MHz, and 6420.79 to 6425.0 MHz.

Company

Baltimore County of Maryland
New Cingular Wireless PCS, LLC - DC
State of Maryland MIEMSS
Washington Gas Light Company
Washington Suburban Sanitary Commission

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.

Expedited Coordination data for this earth station was emailed and sent to the below listed carriers with a letter dated November 18, 2010.

Company

AT&T COMMUNICATIONS OF MARYLAND INC
AT&T COMMUNICATIONS OF VIRGINIA INC
AT&T CORP
Allegheny Power Service Corporation
Alltel Communications of Virginia #1 LLC
Atlantic Broadband (Delmar), LLC
Atlantic Broadband (Penn), LLC
BAY BROADBAND COMMUNICATIONS LLC
Baltimore County of Maryland
Baltimore Gas and Electric Company
COLLEGE OF SOUTHERN MARYLAND
Cellco Partnership - Southern Virginia
Cellco Partnership- PA Region
Cellco Partnership-Newark-Dallas Verizon
Cellco Partnership-Washington/Baltimore
Charles, County of
Conterra Ultra Broadband, LLC
County of Frederick
County of Stafford
DELAWARE STATE - DTI
Enoch Pratt Free Library
Exelon Generation Company, L.L.C
Frederick County
Hardy Cellular Telephone Company
International Communications Group, Inc.
King and Queen County
Local Communications Network, Inc.
Loudoun, County of
MCI Communications Services Inc.
METROPOLITAN AREA NETWORKS, INC.
Maryland Public Broadcasting Commission
Maryland State Highway Administration
Maryland, State of - Budget & Management
National Radio Astronomy Observatory

Company (Continued)

New Cingular Wireless PCS - VA/DC/MD
New Cingular Wireless PCS LLC - DC
New Cingular Wireless PCS LLC- DE/NH/RI
New Cingular Wireless PCS, LLC - PA
Northern Virginia Electric Cooperative
Open Range Communications
PENNSYLVANIA TURNPIKE COMMISSION
Prince George's County
Prince William, County of
RAPPAHANNOCK ELECTRIC COOPERATIVE
SCTF NET
SHENANDOAH VALLEY ELECTRIC COOPERATIVE
Southern Maryland Electric Cooperative I
State of Maryland, MIEMSS
State of WV DHHR/BPH STECS
Texas Eastern Communications, Inc.
USCOC of Cumberland, Inc.
Verizon Maryland, Inc.
Virginia Broadband, LLC
Virginia Department of State Police
Virginia Electric & Power Company
Virginia PCS Alliance, L.C.
WASHINGTON SUBURBAN SANITARY COMMISSION
Washington D.C. SMSA L.P.
Washington Gas Light Company
York County Dept of Emergency Services

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:	12/09/2010
Job Number:	101118COMSJC02

Administrative Information

Status	ENGINEER PROPOSAL
Call Sign	E920590
Licensee Code	ZDYNCO
Licensee Name	CSC

Site Information — FT MEADE, MARYLAND

Venue Name	
Latitude (NAD 83)	39° 6' 17.4" N
Longitude (NAD 83)	76° 45' 48.9" W
Climate Zone	A
Rain Zone	2
Ground Elevation (AMSL)	49.68 m / 163.0 ft

Link Information

Satellite Type	Geostationary
Mode	TR - Transmit-Receive
Modulation	Analog & Digital
Satellite Arc	70° W to 136° West Longitude
Azimuth Range	169.4° to 249.4°
Corresponding Elevation Angles	44.2° / 15.0°
Antenna Centerline (AGL)	7.32 m / 24.0 ft

Antenna Information		Receive		Transmit	
Manufacturer		Andrew Corporation		Andrew Corporation	
Model		ESA120-46HP		ESA120-46HP	
Gain / Diameter		52.5 dBi / 12.0 m		55.9 dBi / 12.0 m	
3-dB / 15-dB Beamwidth		0.40° / 0.80°		0.30° / 0.60°	
Max Available RF Power	(dBW/4 kHz)			-11.9	
	(dBW/MHz)			11.5	
Maximum EIRP	(dBW/4 kHz)			44.0	
	(dBW/MHz)			67.4	
Interference Objectives:	Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
	Short Term	-144.0 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)	882KF9W / 3700.0 - 4200.0	882KF9W / 5925.00 - 6077.45 882KF9W / 6109.45 - 6240.54 882KF9W / 6272.54 - 6388.79 882KF9W / 6420.79 - 6425.00
Max Great Circle Coordination Distance	346.5 km / 215.3 mi	172.5 km / 107.2 mi
Precipitation Scatter Contour Radius	516.5 km / 320.9 mi	100.0 km / 62.1 mi

COMSEARCH

Earth Station Data Sheet

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Coordination Values	**FT MEADE, MD**			
Licensee Name	CSC			
Latitude (NAD 83)	39° 6' 17.4" N			
Longitude (NAD 83)	76° 45' 48.9" W			
Ground Elevation (AMSL)	49.68 m / 163.0 ft			
Antenna Centerline (AGL)	7.32 m / 24.0 ft			
Antenna Model	Andrew Corporation 12 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	-144.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power			-11.9 (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	1.04	109.95	-10.00	209.52	-10.00	100.00
5	1.15	114.79	-10.00	206.16	-10.00	100.00
10	1.29	119.62	-10.00	204.64	-10.00	100.00
15	1.29	124.42	-10.00	204.79	-10.00	100.00
20	1.08	128.92	-10.00	208.25	-10.00	100.00
25	0.99	126.33	-10.00	211.03	-10.00	100.00
30	0.96	123.56	-10.00	212.82	-10.00	100.00
35	1.25	120.79	-10.00	205.95	-10.00	100.00
40	1.46	117.76	-10.00	200.11	-10.00	100.00
45	1.55	114.53	-10.00	197.64	-10.00	100.00
50	1.72	111.20	-10.00	192.88	-10.00	100.00
55	1.32	107.59	-10.00	203.84	-10.00	100.00
60	1.45	104.09	-10.00	200.47	-10.00	100.00
65	1.58	100.51	-10.00	196.72	-10.00	100.00
70	1.53	96.87	-10.00	198.21	-10.00	100.00
75	1.80	93.21	-10.00	190.66	-10.00	100.00
80	1.76	89.52	-10.00	191.80	-10.00	100.00
85	1.70	85.84	-10.00	193.32	-10.00	100.00
90	1.66	82.17	-10.00	194.46	-10.00	100.00
95	1.49	78.57	-10.00	199.34	-10.00	100.00
100	1.34	75.02	-10.00	203.47	-10.00	100.00
105	0.77	71.68	-10.00	222.63	-10.00	101.97
110	0.36	68.42	-10.00	253.39	-10.00	125.11
115	0.00	65.30	-10.00	272.88	-10.00	137.41
120	0.00	62.15	-10.00	272.88	-10.00	137.41
125	0.00	59.15	-10.00	272.88	-10.00	137.41
130	0.00	56.32	-10.00	272.88	-10.00	137.41
135	0.00	53.70	-10.00	272.88	-10.00	137.41
140	0.00	51.31	-10.00	272.88	-10.00	137.41
145	0.00	49.21	-10.00	272.88	-10.00	137.41
150	0.00	47.42	-9.90	273.49	-9.90	137.70
155	0.00	45.99	-9.57	275.51	-9.57	138.67
160	0.00	44.96	-9.32	277.02	-9.32	139.40
165	0.00	44.35	-9.17	277.93	-9.17	139.84
170	0.00	44.19	-9.13	278.18	-9.13	139.96
175	0.00	44.47	-9.20	277.76	-9.20	139.76
180	0.00	44.73	-9.26	277.36	-9.26	139.57
185	0.00	44.47	-9.20	277.76	-9.20	139.76

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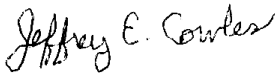
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz	
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
Short Term	-144.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power			-11.9 (dBW/4 kHz)	

			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	43.70	-9.01	278.93	-9.01	140.33
195	0.00	42.44	-8.69	280.90	-8.69	141.29
200	0.00	40.75	-8.25	283.68	-8.25	142.64
205	0.00	38.66	-7.68	287.31	-7.68	144.43
210	0.00	36.24	-6.98	291.85	-6.98	146.68
215	0.00	33.53	-6.14	297.41	-6.14	149.47
220	0.00	30.58	-5.14	304.14	-5.14	152.88
225	0.21	27.28	-3.90	310.90	-3.90	155.84
230	0.00	24.12	-2.56	322.81	-2.56	162.22
235	0.23	20.52	-0.80	331.73	-0.80	165.84
240	0.27	17.42	0.98	339.82	0.98	170.23
245	0.30	15.32	2.37	346.47	2.37	172.51
250	0.36	14.64	2.86	342.68	2.86	168.22
255	0.45	15.55	2.21	325.80	2.21	154.53
260	0.39	17.96	0.64	321.68	0.64	154.68
265	0.27	21.30	-1.21	322.73	-1.21	159.37
270	0.00	25.27	-3.06	319.23	-3.06	160.34
275	0.00	29.39	-4.70	307.11	-4.70	154.39
280	0.00	33.73	-6.20	296.98	-6.20	149.25
285	0.23	38.14	-7.54	284.58	-7.54	142.18
290	0.28	42.72	-8.77	270.11	-8.77	133.74
295	0.23	47.40	-9.90	269.74	-9.90	135.07
300	0.26	52.11	-10.00	265.65	-10.00	133.64
305	0.00	56.91	-10.00	272.88	-10.00	137.41
310	0.24	61.64	-10.00	267.76	-10.00	133.84
315	0.30	66.43	-10.00	260.68	-10.00	130.22
320	0.31	71.24	-10.00	259.85	-10.00	129.65
325	0.31	76.06	-10.00	259.97	-10.00	129.73
330	0.31	80.89	-10.00	259.30	-10.00	129.26
335	0.00	85.73	-10.00	272.88	-10.00	137.41
340	0.44	90.56	-10.00	244.34	-10.00	118.68
345	0.66	95.41	-10.00	228.65	-10.00	106.79
350	0.82	100.26	-10.00	220.03	-10.00	100.00
355	0.95	105.10	-10.00	213.22	-10.00	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.



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DATED: December 9, 2010