

MINOR CHANGE APPLICATION
BROOMFIELD BROADCASTING OF LEXINGTON, INC.
W241AK FM TRANSLATOR STATION
CH 250D - 97.9 MHz - 0.250 kW
LEXINGTON, SOUTH CAROLINA
January 2016

EXHIBIT C

Interference Study for W241AK On Channel 234
Using Proposed Site as Reference

The proposed W241AK operating on Channel 250 with an effective radiated power of 0.250 kilowatt at 53 meters (174 feet) above ground level, will not cause interference to any existing, applied for, or proposed facility. As noted on Exhibit C1, the proposed W241AK is within the predicted 60 dBu contour of third adjacent station WOMG, Channel 253A, Lexington, South Carolina and within the predicted 60 dBu contour of second adjacent station WCOS-FM, Channel 248C1, Columbia, South Carolina. Due to the relationship between the proposed W241AK on Channel 250 and WOMG and WCOS-FM, 40 db ratio of the protected and interfering contours applies. We have, therefore, calculated the WOMG-FM and WCOS-FM levels of signal at the proposed W241AK site. It is proposed to utilize a Shively 6812-2-HW two bay ½ wavelength antenna.

W241AK vs WOMG

The contour of WOMG at the proposed W241AK site is 78.8 dBu (50/50) as shown on Exhibit C3. The corresponding interfering contour for W241AK is 118.8 dBu (50/10). The W241AK antenna will be mounted at 53 meters (174 feet) AGL. There are no structures of

comparable height in the vicinity of the proposed W241AK antenna. It is proposed to utilize an Shively 6812-2-HW two bay half wavelength antenna. By using the specified antenna the proposed W241AK interference contour does not impact any occupied areas and, in fact does not reach ground level, as tabulated in Exhibit C4. As such, WOMG will not receive interference from the proposed translator.

W241AK vs WCOS-FM

The contour of WCOS-FM at the proposed W241AK site is 88.4 dBu (50/50) as shown on Exhibit C5. The corresponding interfering contour for W241AK is 128.4 dBu (50/10). The W241AK antenna will be mounted at 53 meters (174 feet) AGL. There are no structures of comparable height in the vicinity of the proposed W241AK antenna. It is proposed to utilize an Shively 6812-2-HW two bay half wavelength antenna. By using the specified antenna the proposed W241AK interference contour does not impact any occupied areas and, in fact does not reach ground level, as tabulated in Exhibit C6. As such, WCOS-FM will not receive interference from the proposed translator.

Based on the foregoing, it is believed that the proposed W241AK on Channel 250 is in compliance with §74.1204(d) of the Commission's rules. If a waiver of the rule is needed to address WOMG and WCOS-FM, one is respectfully requested.

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EXHIBIT C1

Interference Study for W241AK on Channel 250
Using Proposed Site as Reference

REFERENCE
33 58 25.0 N.
81 08 59.0 W.

CH# 250D - 97.9 MHz, Pwr= 0.25 kW, HAAT= 91.8 M, COR= 175.5 M
Average Protected F(50-50)= 12.3 km
Omni-directional

DISPLAY DATES
DATA 01-29-16
SEARCH 01-29-16

CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*OUT* (Overlap in km)
248C1 Columbia	WCOS-FM	LIC	CN SC	25.0 205.1	20.38 BLH19900927KC	34 08 23.0 81 03 22.0	100.000 299	10.4 392	73.8 Capstar Tx, Llc	-54.5*
253A Lexington	WOMG	LIC	CX SC	220.1 40.1	10.76 BLH20051110AAA	33 53 58.5 81 13 29.6	6.000 99	3.0 212	31.2 Radio License Holding Cbc,	-21.6*
250C2 Blackville	WIIZ	LIC	CN SC	193.0 12.9	98.01 BLH19960502KB	33 06 52.0 81 23 13.0	50.000 132	134.7 189	49.2 Nicwild Communications, In	6.9
251L1 Pontiac	WXNE-LP	CP	SC	53.6 233.7	32.23 BNPL20131112BJZ	34 08 43.4 80 52 03.9	0.018 68	167	Friends Of Independent Pub	7.3
250C Concord	WPEG	LIC	DEX NC	359.8 179.8	154.38 BMLH20121024AAF	35 21 44.0 81 09 19.0	95.000 491	176.4 727	80.3 Wpow License Limited Partn	29.8
251D Orangeburg	W251BZ	CP	C SC	151.5 331.7	67.05 BNPFT20130830APT	33 26 35.4 80 48 16.5	0.019 105	9.2 156	6.5 Radio Training Network, In	41.8
252C3 Summerton	WLJI	LIC	NCX SC	110.9 291.3	79.58 BLH20081118ALH	33 42 58.0 80 20 44.0	16.000 100	3.4 142	33.8 Glory Communications, Inc.	44.7

Terrain database is FCC NGDC 30 Sec, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM

In & Out distances between contours are shown at closest points. Reference Zone= East Zone, Co to 3rd adjacent.

All separation margins (if shown) include rounding.

Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)

Incoming contour overlap is ignored.

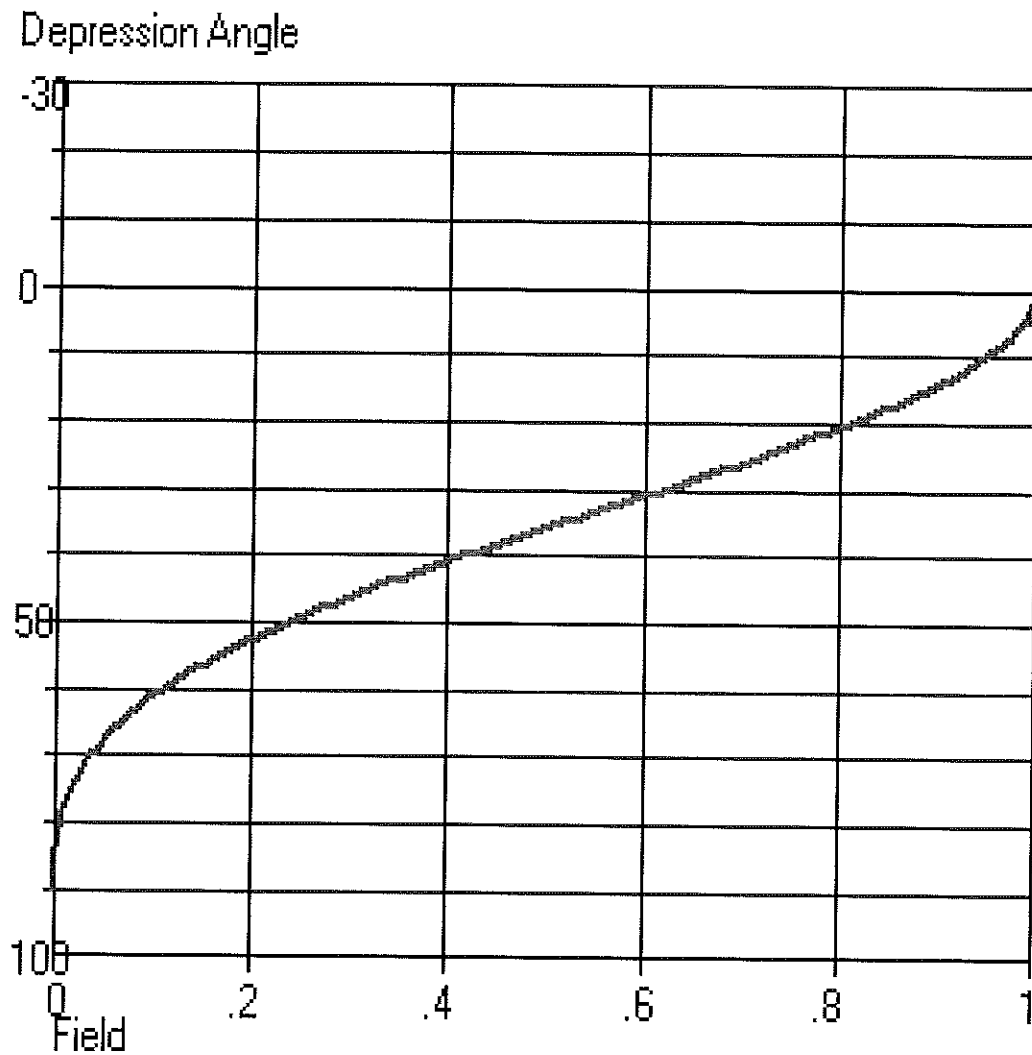
"*"affixed to 'IN' or 'OUT' values = site inside restricted contour.

Reference station has protected zone issue: AM tower

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EXHIBIT C2

Antenna= SHIVELY 68-- -2-HW



W241AK - Lexington, SC - Proposed

Latitude: 33-58-25 N - Longitude: 081-08-59 W
Channel: 250 - Frequency: 97.9 MHz
ERP: 0.25 kW - AMSL Height: 175.5 m

WOMG - Lexington, SC - BLH20051110AAA

Latitude: 33-53-58.50 N - Longitude: 081-13-29.60 W
Channel: 253 - Frequency: 98.5 MHz
ERP: 6.00 kW - AMSL Height: 212.0 m

GRAHAM BROCK, INC.

BROADCAST TECHNICAL CONSULTANTS

EXHIBIT C3

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- WOMG 78.8 dBu (50/50)
- W241AK Proposed 118.8 dBu (50/10)

Scale 1:24,000



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EXHIBIT C4

W241AK vs WOMG

W241AK Lexington, SC
 74.1204(d) Showing
 Translator or LPFM Maximum Licensed ERP = 0.25
 Translator or LPFM Antenna Height AG = 53 Meters
 W241AK Antenna Model = SHIVELY 68-- -2-HW

Protected Station's Contour = 78.8 dBu
 Translator's or LPFM's full Interference contour 118.8

Review Azimuth = 0 Degrees True
 Relative Field on the horizon at Review Azimuth = 1.000
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW
 Distance between stations = 10.8 km
 Protected Station= WOMG, 6 kW, 212 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kW)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	127.3415	127.3415	053.000
05.00	0.987	1.0	0.2435	125.6861	125.2078	042.046
10.00	0.949	1.0	0.2252	120.8471	119.0112	032.015
15.00	0.889	1.0	0.1976	113.2066	109.3492	023.700
20.00	0.81	1.0	0.1640	103.1466	096.9261	017.722
25.00	0.718	1.0	0.1289	091.4312	082.8648	014.360
30.00	0.617	1.0	0.0952	078.5697	068.0434	013.715
35.00	0.514	1.0	0.0660	065.4535	053.6164	015.457
40.00	0.414	1.0	0.0428	052.7194	040.3854	019.113
45.00	0.32	1.0	0.0256	040.7493	028.8141	024.186
50.00	0.237	1.0	0.0140	030.1799	019.3993	029.881
55.00	0.166	1.0	0.0069	021.1387	012.1247	035.684
60.00	0.109	1.0	0.0030	013.8802	006.9401	040.979
65.00	0.066	1.0	0.0011	008.4045	003.5519	045.383
70.00	0.035	1.0	0.0003	004.4570	001.5244	048.812
75.00	0.016	1.0	0.0001	002.0375	000.5273	051.032
80.00	0.005	1.0	0.0000	000.6367	000.1106	052.373
85.00	0.001	1.0	0.0000	000.1273	000.0111	052.873
90.00	0.0	1.0	0.0000	000.0064	000.0000	052.994

W241AK - Lexington, SC - Proposed

Latitude: 33-58-25 N - Longitude: 081-08-59 W
Channel: 250 - Frequency: 97.9 MHz
ERP: 0.25 kW - AMSL Height: 175.5 m

WCOS-FM - Columbia, SC - BLH19900927KC

Latitude: 34-08-23 N - Longitude: 081-03-22 W
Channel: 248 - Frequency: 97.5 MHz
ERP: 100.00 kW - AMSL Height: 392.0 m

GRAHAM BROCK, INC.

BROADCAST TECHNICAL CONSULTANTS

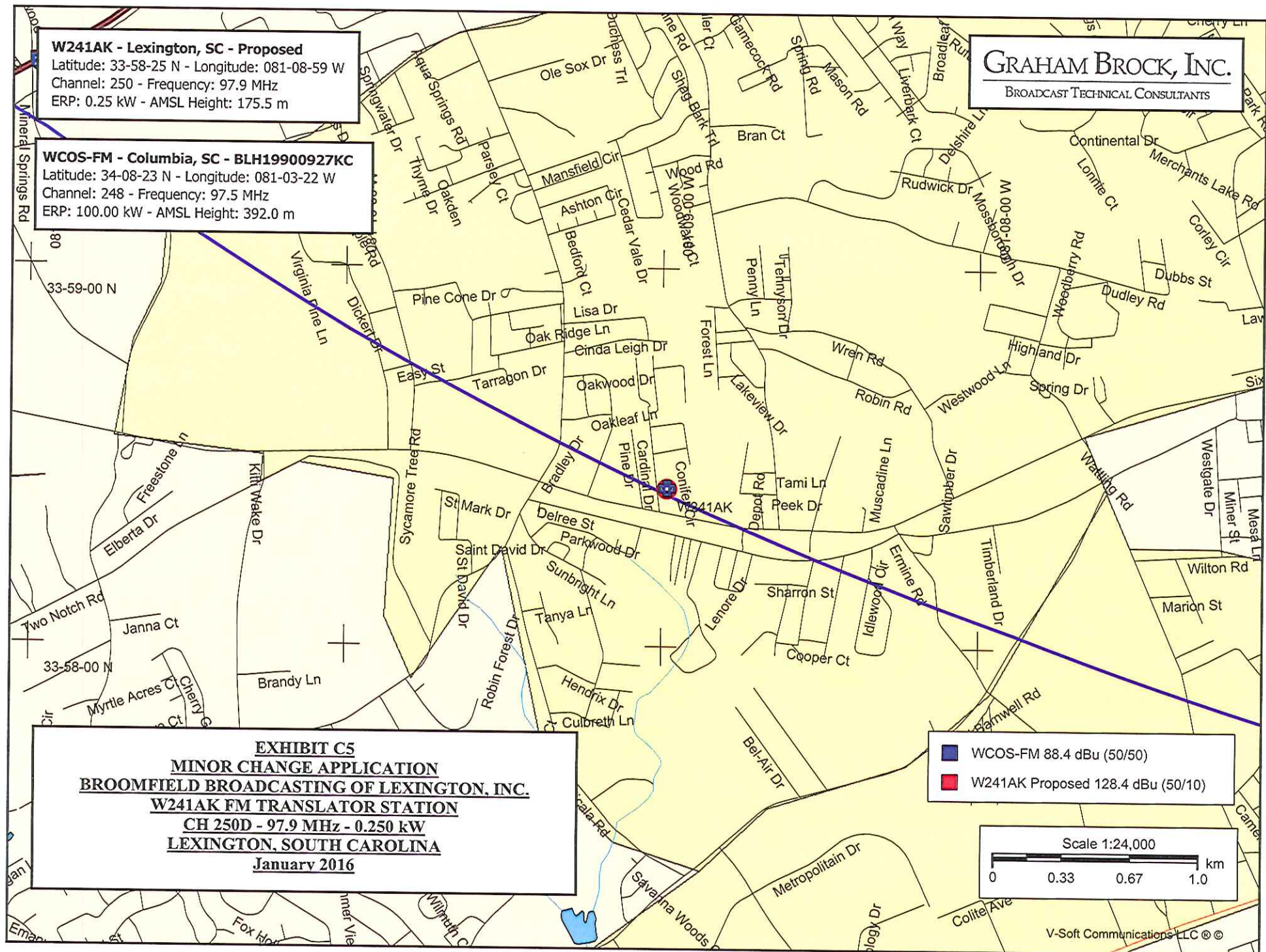


EXHIBIT C5

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EXHIBIT C6

W241AK vs WCOS-FM

W241AK Lexington, SC
 74.1204(d) Showing
 Translator or LPFM Maximum Licensed ERP = 0.25
 Translator or LPFM Antenna Height AG = 53 Meters
 W241AK Antenna Model = SHIVELY 68-- -2-HW

Protected Station's Contour = 88.4 dBu
 Translator's or LPFM's full Interference contour 128.4

Review Azimuth = 0 Degrees True
 Relative Field on the horizon at Review Azimuth = 1.000
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW
 Distance between stations = 20.4 km
 Protected Station= WCOS-F, 100 kW, 392 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	042.1667	042.1667	053.000
05.00	0.987	1.0	0.2435	041.6186	041.4602	049.373
10.00	0.949	1.0	0.2252	040.0162	039.4083	046.051
15.00	0.889	1.0	0.1976	037.4862	036.2089	043.298
20.00	0.81	1.0	0.1640	034.1551	032.0953	041.318
25.00	0.718	1.0	0.1289	030.2757	027.4391	040.205
30.00	0.617	1.0	0.0952	026.0169	022.5313	039.992
35.00	0.514	1.0	0.0660	021.6737	017.7541	040.568
40.00	0.414	1.0	0.0428	017.4570	013.3729	041.779
45.00	0.32	1.0	0.0256	013.4934	009.5412	043.459
50.00	0.237	1.0	0.0140	009.9935	006.4237	045.345
55.00	0.166	1.0	0.0069	006.9997	004.0149	047.266
60.00	0.109	1.0	0.0030	004.5962	002.2981	049.020
65.00	0.066	1.0	0.0011	002.7830	001.1761	050.478
70.00	0.035	1.0	0.0003	001.4758	000.5048	051.613
75.00	0.016	1.0	0.0001	000.6747	000.1746	052.348
80.00	0.005	1.0	0.0000	000.2108	000.0366	052.792
85.00	0.001	1.0	0.0000	000.0422	000.0037	052.958
90.00	0.0	1.0	0.0000	000.0021	000.0000	052.998

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EXHIBIT C7

N. Lat. = 33° 58' 25.0" - Protected and Interfering Contours
W. Lng. = 81° 09' 59.0" - W241AK on Channel 250, Lexington, South Carolina

HAAT and Distance to Contour,
FCC, FM 2-10 Mi, 51 pts Method - FCC 30 SEC

Azi.	AV EL	HAAT	ERP kW	dBk	Field	128.4-F1	118.8-F1	100-F1	60-F5	54-F1	40-F1
000	75.0	100.5	0.2500	-6.02	1.000	0.04	0.13	1.11	12.90	19.26	44.34
010	76.8	98.7	0.2500	-6.02	1.000	0.04	0.13	1.11	12.78	19.05	43.97
020	70.4	105.1	0.2500	-6.02	1.000	0.04	0.13	1.11	13.18	19.76	45.24
030	78.4	97.1	0.2500	-6.02	1.000	0.04	0.13	1.11	12.68	18.87	43.64
040	68.6	106.9	0.2500	-6.02	1.000	0.04	0.13	1.11	13.29	19.95	45.57
050	77.4	98.1	0.2500	-6.02	1.000	0.04	0.13	1.11	12.74	18.98	43.84
060	77.1	98.4	0.2500	-6.02	1.000	0.04	0.13	1.11	12.76	19.01	43.91
070	80.9	94.6	0.2500	-6.02	1.000	0.04	0.13	1.11	12.52	18.57	43.09
080	72.4	103.1	0.2500	-6.02	1.000	0.04	0.13	1.11	13.06	19.54	44.85
090	56.2	119.3	0.2500	-6.02	1.000	0.04	0.13	1.11	14.03	21.17	47.60
100	50.4	125.1	0.2500	-6.02	1.000	0.04	0.13	1.11	14.36	21.68	48.42
110	45.1	130.4	0.2500	-6.02	1.000	0.04	0.13	1.11	14.67	22.13	49.13
120	46.7	128.8	0.2500	-6.02	1.000	0.04	0.13	1.11	14.57	21.99	48.91
130	52.7	122.8	0.2500	-6.02	1.000	0.04	0.13	1.11	14.23	21.48	48.09
140	64.8	110.7	0.2500	-6.02	1.000	0.04	0.13	1.11	13.52	20.34	46.23
150	78.3	97.2	0.2500	-6.02	1.000	0.04	0.13	1.11	12.69	18.88	43.66
160	82.8	92.7	0.2500	-6.02	1.000	0.04	0.13	1.11	12.40	18.35	42.68
170	80.1	95.4	0.2500	-6.02	1.000	0.04	0.13	1.11	12.57	18.66	43.27
180	88.4	87.1	0.2500	-6.02	1.000	0.04	0.13	1.11	12.04	17.67	41.39
190	87.8	87.7	0.2500	-6.02	1.000	0.04	0.13	1.11	12.08	17.75	41.54
200	99.7	75.8	0.2500	-6.02	1.000	0.04	0.13	1.11	11.29	16.24	38.56
210	82.1	93.4	0.2500	-6.02	1.000	0.04	0.13	1.11	12.44	18.43	42.82
220	92.4	83.1	0.2500	-6.02	1.000	0.04	0.13	1.11	11.78	17.17	40.41
230	112.1	63.4	0.2500	-6.02	1.000	0.04	0.13	1.11	10.42	14.49	35.15
240	106.7	68.8	0.2500	-6.02	1.000	0.04	0.13	1.11	10.81	15.32	36.67
250	116.4	59.1	0.2500	-6.02	1.000	0.04	0.13	1.11	10.10	14.05	33.89
260	113.4	62.1	0.2500	-6.02	1.000	0.04	0.13	1.11	10.33	14.36	34.77
270	121.5	54.0	0.2500	-6.02	1.000	0.04	0.13	1.11	9.67	13.46	32.18
280	121.0	54.5	0.2500	-6.02	1.000	0.04	0.13	1.11	9.71	13.53	32.37
290	115.8	59.7	0.2500	-6.02	1.000	0.04	0.13	1.11	10.15	14.11	34.08
300	106.5	69.0	0.2500	-6.02	1.000	0.04	0.13	1.11	10.83	15.36	36.75
310	102.7	72.8	0.2500	-6.02	1.000	0.04	0.13	1.11	11.09	15.86	37.78
320	102.7	72.8	0.2500	-6.02	1.000	0.04	0.13	1.11	11.08	15.85	37.76
330	87.7	87.8	0.2500	-6.02	1.000	0.04	0.13	1.11	12.09	17.76	41.56
340	80.1	95.4	0.2500	-6.02	1.000	0.04	0.13	1.11	12.57	18.67	43.28
350	81.9	93.6	0.2500	-6.02	1.000	0.04	0.13	1.11	12.46	18.45	42.87

AMSL= 175.5 M