

Channel Study

REFERENCE		CH# 214B - 90.7 MHz, Pwr= 47 kW DA, HAAT= 156.0 M, COR= 157 M								DISPLAY DATES	
37 10 53.0 N.		Average Protected F(50-50)= 52.4 km								DATA 05-09-11	
75 57 47.0 W.		Standard Directional								SEARCH 05-09-11	
CH	CALL	TYPE	ANT	AZI.	DIST	LAT.	Pwr(kW)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG.	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)	
214B	WZLV	CP	DCX	0.0	0.0	37 10 53.0	47.000	107.8	40.6	-148.5*	-148.5*
Cape Charles		VA		0.0	BPED20091009AAJ	75 57 47.0	156	157	Educational Media Foundati		
214B	WZLV	LIC	CX	0.0	0.0	37 10 53.0	13.000	107.9	40.7	-148.5*	-148.5*
Cape Charles		VA		0.0	BLED20041101ACT	75 57 47.0	156	157	Educational Media Foundati		
215B1	WCWM	LIC	DCX	282.2	93.9	37 21 16.0	13.500	49.7	31.5	2.8	0.9
Williamsburg		VA		101.5	BLED20041022ACN	76 59 58.0	82	100	The College Of William & M		
211A	WHRX	LIC	VX	15.8	43.4	37 33 27.0	0.450	1.5	10.5	1.1	28.8
Nassawadox		VA		195.9	BLED20050405ABX	75 49 44.0	61	54	Hampton Roads Educational		
216B1	WNSB	LIC	CN	219.9	58.7	36 46 32.0	8.100	3.4	34.5	2.8	18.2
Norfolk		VA		39.7	BLED19980603KA	76 23 11.0	132	133	Norfolk State University B		
212B	WHRO-FM	APP	CX	229.4	63.5	36 48 31.0	8.800	5.0	52.2	5.9	5.3
Norfolk		VA		49.0	BPED20030507ABV	76 30 13.0	350	353	Hampton Roads Educational		
212B	WHRO-FM	LIC	CX	229.4	63.5	36 48 31.0	7.300	4.6	50.4	6.3	7.0
Norfolk		VA		49.0	BLED20030506AAW	76 30 13.0	350	353	Hampton Roads Educational		
214B1	WSDL	LIC	CX	25.2	162.4	38 30 06.0	18.500	106.7	36.6	15.2	19.0
Ocean City		MD		205.7	BLED20020117AAJ	75 10 07.0	101	105	Salisbury University Found		
211B	WHRX	CP	CX	22.4	63.8	37 42 42.0	50.000	4.2	40.1	18.6	19.5
Nassawadox		VA		202.6	BPED20100823ABI	75 41 10.0	78	83	Hampton Roads Educational		
267B	WWDE-FM«	LIC	CN	213.2	46.9	36 49 41.0	50.000	0.0	0.0	19.5R	27.4M
Hampton		VA		33.0	BLH19850327KR	76 15 05.0	152	153	Entercom Norfolk License,		
214B1	WVRA	CP	DEX	277.7	158.4	37 21 32.0	11.800	62.8	20.2	53.8	28.1
Amelia Court House		VA		96.6	BNPED20071019AEA	77 44 08.0	140	213	Liberty University, Inc.		
215C2	WURI	CP	CX	169.6	143.7	35 54 28.0	50.000	59.5	35.7	36.3	36.9
Manteo		NC		349.7	BPED20101209AJE	75 40 26.0	57	57	Board Of Trustees Universi		
213B	WJYJ	LIC	DCX	305.5	151.9	37 57 56.0	26.000	68.3	45.7	43.1	46.1
Fredericksburg		VA		124.6	BLED20101215AAD	77 22 19.0	128	175	Positive Alternative Radio		
215A	WURI	LIC	CX	169.6	143.7	35 54 28.0	3.900	28.9	19.8	66.9	52.8
Manteo		NC		349.7	BMLED20040415ACJ	75 40 26.0	57	57	Board Of Trustees Universi		
213C2	1212011	APP	DCX	212.9	169.6	35 53 44.0	7.800	53.2	35.7	63.8	55.6
Williamston		NC		32.3	BNPED20071022AVD	76 59 10.0	203	210	Roanoke Valley Communicati		

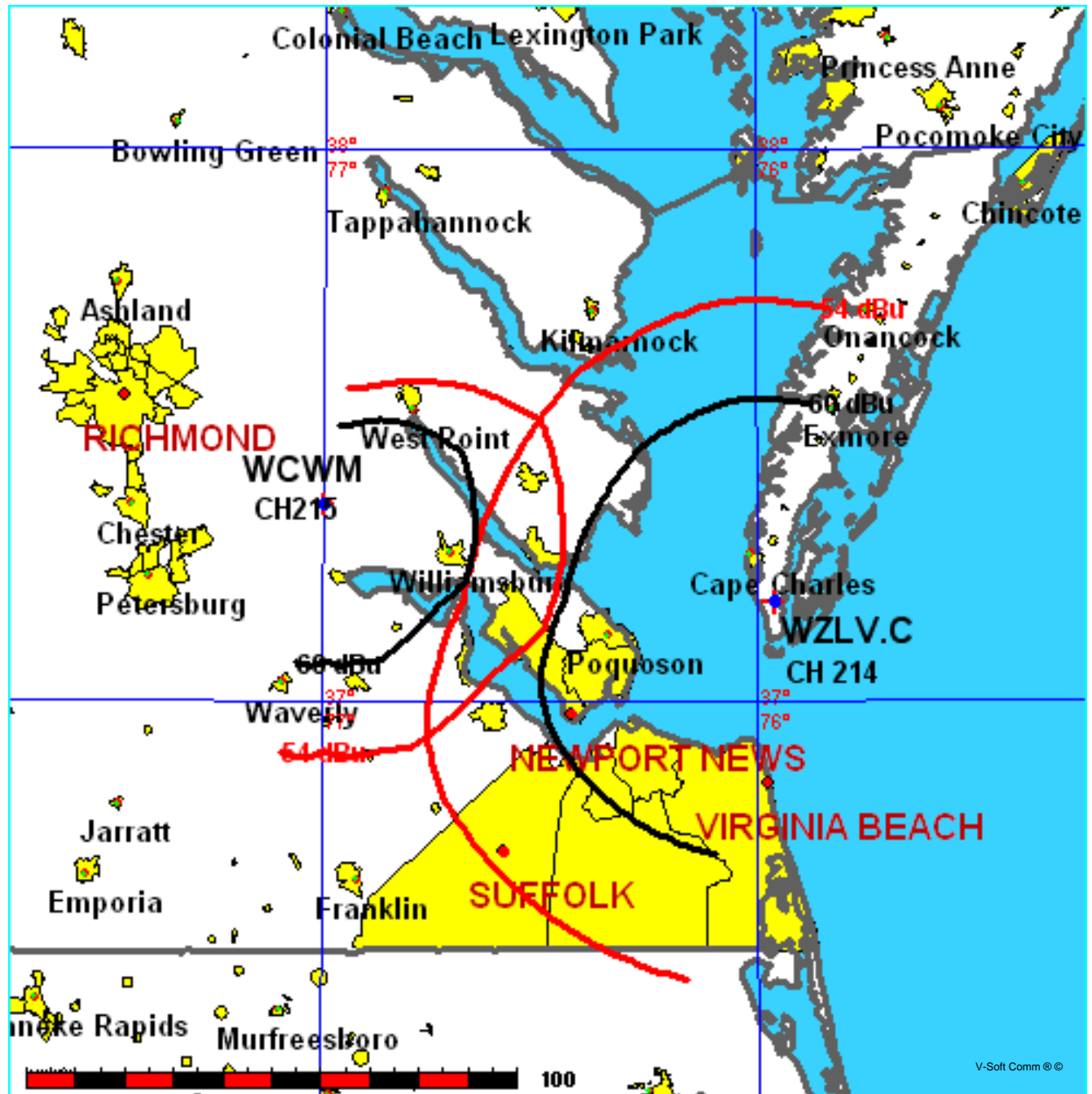
Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM
 Contour distances are on direct line to and from reference station. Reference Zone = 1, Co to 3rd adjacent.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), eamtilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside protected contour.
 « = Station meets FCC minimum distance spacing for its class.
 < = Contour Overlap

Exhibit 18-A

FMCommander Single Allocation Study - 05-09-2011 - NGDC 30 SEC
WZLV.C's Overlaps (In= 2.75 km, Out= 0.91 km)

WZLV.C CH 214 B DA
Lat= 37 10 53.0, Lng= 75 57 47.0
47.0 kW 156 M HAAT, 157 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WCWM CH 215 B1 DA BLED20041022ACN
Lat= 37 21 16.0, Lng= 76 59 58.0
13.5 kW 82 M HAAT, 100 M COR
Prot.= 60 dBu, Intef.= 54 dBu



WCWM and WZLV

05-09-2011 Terrain Data FMOver Analysis

WZLV.C

WCWM BLED20041022ACN

Channel = 214B
Max ERP = 47 kW
RCAMSL = 157 M
N. Lat. 37 10 53.0
W. Lng. 75 57 47.0
Protected
60 dBu

Channel = 215B1
Max ERP = 13.5 kW
RCAMSL = 100 M
N. Lat. 37 21 16.0
W. Lng. 76 59 58.0
Interfering
54 dBu

Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Actual (dBu)	I X (km)
259.0	025.7094	0157.0	047.1	121.6	012.4520	0096.2	053.7	53.09	
260.0	024.4325	0157.0	046.7	120.7	012.7572	0095.6	053.5	53.23	
261.0	023.4398	0157.0	046.3	119.7	012.9793	0095.0	053.2	53.35	
262.0	022.4676	0157.0	046.0	118.8	013.0287	0094.2	053.0	53.38	
263.0	021.5160	0157.0	045.6	117.9	013.0787	0093.5	052.9	53.40	
264.0	020.5850	0157.0	045.2	116.9	013.1291	0092.8	052.8	53.41	
265.0	019.6746	0157.0	044.8	116.0	013.1798	0092.1	052.7	53.41	
266.0	018.7848	0157.0	044.4	115.0	013.2307	0091.5	052.6	53.40	
267.0	017.9156	0157.0	044.0	114.1	013.2817	0090.8	052.6	53.36	
268.0	017.0670	0157.0	043.6	113.1	013.3326	0090.1	052.6	53.32	
269.0	016.2389	0157.0	043.1	112.2	013.3832	0089.4	052.7	53.25	
270.0	015.4315	0157.0	042.7	111.2	013.4335	0088.7	052.8	53.16	
271.0	015.2382	0157.0	042.6	110.4	013.4766	0088.1	052.7	53.19	
272.0	015.0461	0157.0	042.5	109.6	013.5000	0087.6	052.5	53.21	
273.0	014.8552	0157.0	042.4	108.8	013.5000	0087.1	052.4	53.21	
274.0	014.6656	0157.0	042.3	108.0	013.5000	0086.9	052.3	53.22	
275.0	014.4772	0156.9	042.2	107.2	013.5000	0086.6	052.3	53.22	
276.0	014.2900	0156.9	042.1	106.4	013.5000	0086.4	052.2	53.22	
277.0	014.1040	0156.9	041.9	105.6	013.5000	0086.3	052.2	53.22	
278.0	013.9192	0156.9	041.8	104.7	013.5000	0086.1	052.2	53.20	
279.0	013.7357	0156.8	041.7	103.9	013.5000	0086.0	052.3	53.17	
280.0	013.5533	0156.8	041.6	103.1	013.5000	0085.7	052.3	53.13	
281.0	013.4576	0156.8	041.5	102.3	013.5000	0085.3	052.3	53.09	
282.0	013.3622	0156.8	041.5	101.5	013.5000	0084.8	052.4	53.03	

05-09-2011 Terrain Data

WCWM BLED20041022ACN

Channel = 215B1
Max ERP = 13.5 kW
RCAMSL = 100 M
N. Lat. 37 21 16.0
W. Lng. 76 59 58.0
Protected
60 dBu

WZLV. C

Channel = 214B
Max ERP = 47 kW
RCAMSL = 157 M
N. Lat. 37 10 53.0
W. Lng. 75 57 47.0
Interfering
54 dBu

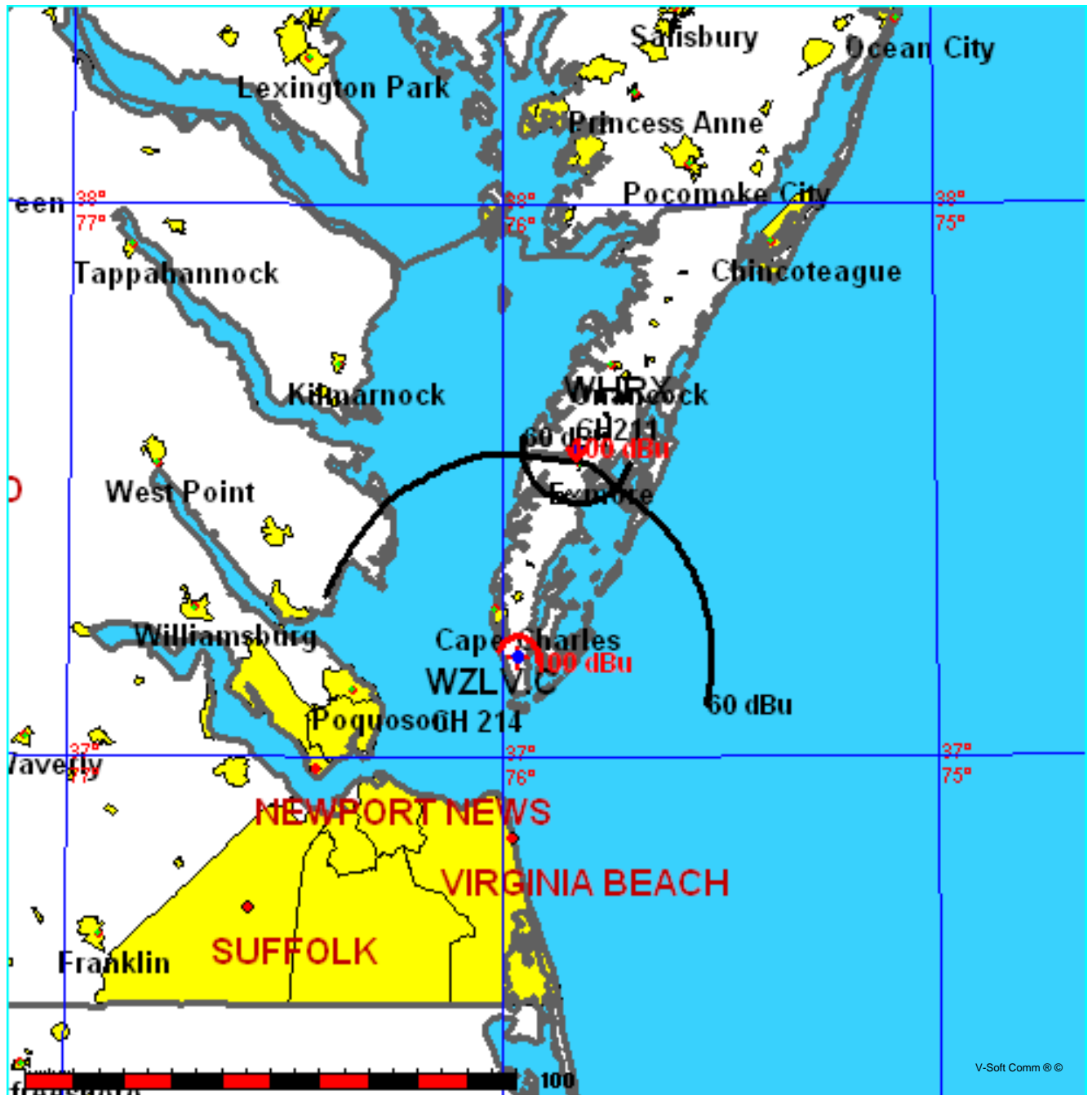
Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Actual (dBu)	I X (km)
092.0	013.5000	0080.0	030.6	286.7	012.9139	0156.6	064.0	53.00	
093.0	013.5000	0080.4	030.7	286.3	012.9564	0156.6	063.8	53.08	
094.0	013.5000	0080.8	030.8	285.8	012.9996	0156.6	063.6	53.16	
095.0	013.5000	0081.3	030.8	285.4	013.0432	0156.7	063.4	53.24	
096.0	013.5000	0081.7	030.9	284.9	013.0876	0156.7	063.2	53.31	
097.0	013.5000	0082.1	031.0	284.4	013.1328	0156.7	063.1	53.37	
098.0	013.5000	0082.5	031.1	283.9	013.1785	0156.7	063.0	53.44	
099.0	013.5000	0083.1	031.2	283.4	013.2247	0156.7	062.8	53.50	
100.0	013.5000	0083.7	031.3	283.0	013.2714	0156.7	062.7	53.57	
101.0	013.5000	0084.4	031.4	282.5	013.3188	0156.7	062.5	53.64	
102.0	013.5000	0085.1	031.6	282.0	013.3670	0156.8	062.4	53.70	
103.0	013.5000	0085.7	031.7	281.4	013.4157	0156.8	062.3	53.75	
104.0	013.5000	0086.0	031.7	280.9	013.4647	0156.8	062.3	53.77	
105.0	013.5000	0086.2	031.8	280.4	013.5138	0156.8	062.3	53.79	
106.0	013.5000	0086.3	031.8	279.9	013.5714	0156.8	062.3	53.80	
107.0	013.5000	0086.5	031.8	279.4	013.6647	0156.8	062.3	53.82	
108.0	013.5000	0086.9	031.9	278.9	013.7590	0156.8	062.4	53.84	
109.0	013.5000	0087.2	031.9	278.4	013.8537	0156.9	062.4	53.86	
110.0	013.5000	0087.8	032.1	277.8	013.9504	0156.9	062.4	53.89	
111.0	013.4461	0088.5	032.2	277.3	014.0472	0156.9	062.4	53.90	
112.0	013.3922	0089.3	032.3	276.8	014.1449	0156.9	062.5	53.92	
113.0	013.3385	0090.1	032.4	276.3	014.2429	0156.9	062.5	53.93	
114.0	013.2849	0090.8	032.5	275.7	014.3406	0156.9	062.6	53.94	
115.0	013.2314	0091.5	032.6	275.2	014.4379	0156.9	062.7	53.93	
116.0	013.1779	0092.1	032.7	274.7	014.5351	0156.9	062.8	53.92	
117.0	013.1246	0092.8	032.8	274.2	014.6320	0157.0	063.0	53.90	
118.0	013.0715	0093.6	032.9	273.7	014.7295	0157.0	063.1	53.88	
119.0	013.0184	0094.4	033.0	273.1	014.8273	0157.0	063.3	53.86	
120.0	012.9654	0095.2	033.1	272.6	014.9245	0157.0	063.4	53.83	
121.0	012.6498	0095.8	033.0	272.2	015.0057	0157.0	063.8	53.74	
122.0	012.3381	0096.4	032.9	271.8	015.0822	0157.0	064.2	53.63	
123.0	012.0303	0096.7	032.8	271.4	015.1537	0157.0	064.6	53.51	
124.0	011.7264	0096.9	032.6	271.1	015.2207	0157.0	065.0	53.38	
125.0	011.4264	0097.1	032.4	270.8	015.2840	0157.0	065.5	53.25	
126.0	011.1303	0097.3	032.2	270.5	015.3442	0157.0	066.0	53.11	

Exhibit 18-B

FMCommander Single Allocation Study - 05-09-2011 - NGDC 30 SEC
WZLV.C's Overlaps (In= 1.07 km, Out= 28.79 km)

WZLV.C CH 214 B DA
Lat= 37 10 53.0, Lng= 75 57 47.0
47.0 kW 156 M HAAT, 157 M COR
Prot.= 60 dBu, Intef.= 100 dBu

WHRX CH 211 A BLED20050405ABX
Lat= 37 33 27.0, Lng= 75 49 44.0
0.45 kW 60.7 M HAAT, 54 M COR
Prot.= 60 dBu, Intef.= 100 dBu



WHRX and WZLV

05-09-2011 Terrain Data FMOver Analysis

WZLV.C

WHRX BLED20050405ABX

Channel = 214B
Max ERP = 47 kW
RCAMSL = 157 M
N. Lat. 37 10 53.0
W. Lng. 75 57 47.0
Protected
60 dBu

Channel = 211A
Max ERP = 0.45 kW
RCAMSL = 54 M
N. Lat. 37 33 27.0
W. Lng. 75 49 44.0
Interfering
100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
014.0	012.9642	0151.5	040.6	220.6	000.4500	0051.7	003.1	81.57	
015.0	013.0533	0152.1	040.7	208.5	000.4500	0049.3	002.8	83.47	
016.0	013.1426	0153.0	040.9	193.5	000.4500	0048.1	002.5	84.92	
017.0	013.2322	0153.8	041.0	176.8	000.4500	0052.2	002.5	85.80	
018.0	013.3221	0154.6	041.2	161.4	000.4500	0052.9	002.7	84.33	
019.0	013.4124	0155.1	041.3	149.6	000.4500	0053.4	003.1	81.83	

Exhibit 18-C

FMCommander Single Allocation Study - 05-09-2011 - NGDC 30 SEC
WZLV.C's Overlaps (In= 2.83 km, Out= 18.19 km)

WZLV.C CH 214 B DA
Lat= 37 10 53.0, Lng= 75 57 47.0
47.0 kW 156 M HAAT, 157 M COR
Prot.= 60 dBu, Intef.= 100 dBu

WNSB CH 216 B1 BLED19980603KA
Lat= 36 46 32.0, Lng= 76 23 11.0
8.1 kW 132 M HAAT, 133 M COR
Prot.= 60 dBu, Intef.= 100 dBu

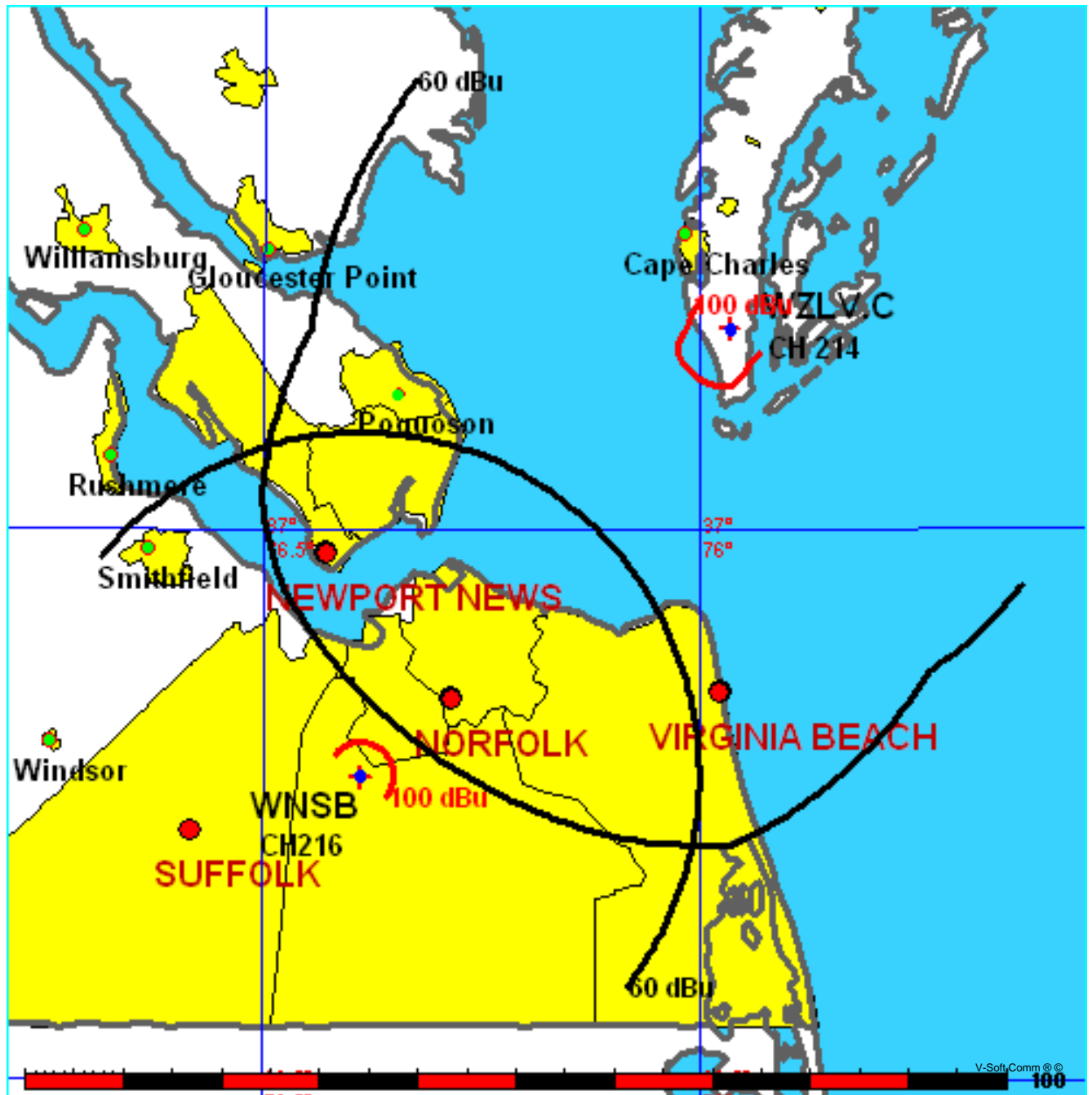


Exhibit 18-D

FMCommander Single Allocation Study - 05-09-2011 - NGDC 30 SEC
WZLV.C's Overlaps (In= 5.94 km, Out= 5.27 km)

WZLV.C CH 214 B DA
Lat= 37 10 53.0, Lng= 75 57 47.0
47.0 kW 156 M HAAT, 157 M COR
Prot.= 60 dBu, Intef.= 100 dBu

WHRO-FM.A CH 212 B BPED20030507ABV
Lat= 36 48 31.0, Lng= 76 30 13.0
8.8 kW 350.3 M HAAT, 353.3 M COR
Prot.= 60 dBu, Intef.= 100 dBu

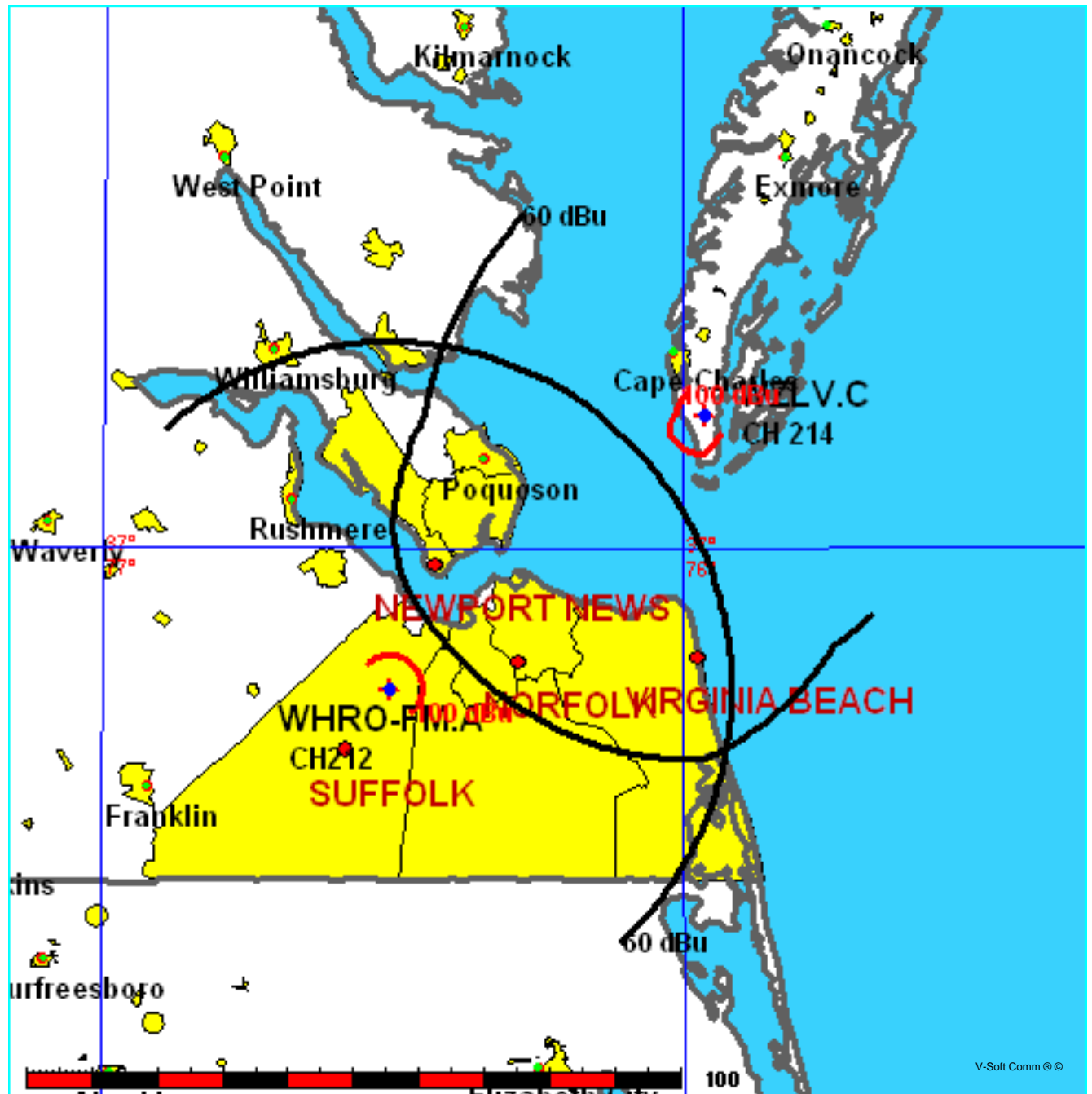


Exhibit 18-E

FMCommander Single Allocation Study - 05-09-2011 - NGDC 30 SEC
WZLV.C's Overlaps (In= 6.28 km, Out= 7.01 km)

WZLV.C CH 214 B DA
Lat= 37 10 53.0, Lng= 75 57 47.0
47.0 kW 156 M HAAT, 157 M COR
Prot.= 60 dBu, Intef.= 100 dBu

WHRO-FM CH 212 B BLED20030506AAW
Lat= 36 48 31.0, Lng= 76 30 13.0
7.3 kW 350.3 M HAAT, 353.3 M COR
Prot.= 60 dBu, Intef.= 100 dBu

