

Kate English  
Doug Vernier Telecommunications Consultants

WCNP - Modify directional antenna  
Liberty And Freedom Inc.  
Average Protected F(50-50)= 47.46 km  
Standard Directional

REFERENCE  
43 25 40.3 N.  
89 39 06.5 W.

CH# 208B - 89.5 MHz, Pwr= 6.5 kW DA, HAAT= 320.6 M, COR= 610.2 M

DISPLAY DATES  
DATA 05-25-11  
SEARCH 05-25-11

CH CITY	CALL	TYPE ANT STATE	AZI <--	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
208B WCNP Baraboo		APP DCX WI	0.0 0.0	0.0 BMPED20110120AAM	43 25 40.3 89 39 06.5	5.700 321	115.3 610	47.2 Liberty And Freedom Inc.	-163.7*	-164.8*
208B WCNP Baraboo		CP DCX WI	77.3 257.3	0.4 BNPED20071012AJK	43 25 43.0 89 38 50.0	10.000 254	105.3 542	40.3 Liberty And Freedom Inc.	-152.7*	-155.9*
208B WNIJ Dekalb		LIC DCN IL	161.1 341.5	165.8 BLED19891011KA	42 00 55.0 89 00 07.0	50.000 128	137.9 380	52.6 Northern Illinois Universi	0.0	34.7
207C3 WEQS Sparta		CP DCX WI	302.8 122.2	94.8 BMPED20100323ACR	43 53 09.0 90 38 43.0	7.500 160	35.1 490	20.2 Crossfire Incorporated	14.5	0.2
208C1 WCLQ Wausau		LIC DCX WI	359.3 179.2	165.9 BLED20040225ABB	44 55 11.0 89 40 45.0	90.000 185	117.8 569	45.5 Christian Life Communicati	0.7	0.3
261A WDDC« Portage		LIC NCN WI	57.5 237.7	20.9 BLH19990329KG	43 31 42.0 89 26 01.0	3.100 114	12.8 367	58.8 Magnum Communications, Inc	14.5R	6.4M
210B1 WORT Madison		LIC _CN WI	162.3 342.4	44.0 BLED19990208KB	43 03 03.0 89 29 13.0	2.000 286	2.7 582	35.5 Back Porch Radio Broadcast	14.1	6.4
206C2 WHAA Adams		LIC DC_ WI	6.5 186.5	66.3 BLED20100212AAK	44 01 13.0 89 33 31.0	28.500 177	5.7 487	50.7 State Of Wisconsin - Educa	12.2	11.1
207C1 WPNE Green Bay		LIC _CY WI	49.9 231.0	171.4 BLED20030815ADO	44 24 35.0 88 00 06.0	100.000 286	105.6 513	72.6 State Of Wisconsin - Educa	19.6	30.9
208C3 KQAL Winona		CP DCX MN	295.6 114.2	170.5 BPED20100427ABH	44 04 26.0 91 34 38.0	2.500 210	89.1 480	33.0 Winona State University	34.0	22.1
209B WUWM Milwaukee		LIC _CX WI	104.2 285.4	146.9 BLED20060419ACI	43 05 26.0 87 53 50.0	13.500 289	74.4 484	50.5 Board Of Regents, Universi	27.3	31.4

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= - 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), Beamtilt(Y,N,X)  
"\*"affixed to 'IN' or 'OUT' values = site inside protected contour.  
« = Station meets FCC minimum distance spacing for its class.

## HOW TO READ THE FM COMPUTER PRINT-OUT

### Full Service Stations

The computer printout should be self-explanatory for the most part. The parameters of the station being checked, (reference station) are printed in the heading. Contour distances are in kilometers and are predicted using the Commission's TVFMINT FORTRAN subroutine. When interference contour distances are less than 16 kilometers the F(50-50) tables are used. If signal contour distances are less than 1.6 km the free-space equation is used.

The column listed "IN " is the difference in kilometers between of the reference station's protected contour and the data file station's interference contour at the closest point between the contours. (All distances are derived by the method detailed in Sec. 73.208 of the Rules and Regulations as amended in Docket 80-90.) Therefore, "IN" column is a measure of incoming interference. Negative distances in this column indicate the presence of contour overlap. Listed antenna heights and power are those given in the FCC database. The column labeled "OUT " shows the greatest distance in kilometers of overlap or smallest of clearance between the reference station's interference contour and the database station's protected contour. Negative distance figures in this column indicate outgoing contour overlap.

Under the "AZI" column, the first row of numbers indicate the True North bearings from the reference station toward the database stations, while the numbers in the second row indicate the reverse bearings from the database stations to the reference station.

The columns labeled "INT" and "PRO" contain the distance in kilometers of the appropriate interference contour and the protected contour of a data base station.

For I.F. relationships, some channel-six TV relationships and relationships with commercial channel stations providing clearance the minimum spacings values the "IN" and "OUT" columns can change their significance. The letter "R" stands for the minimum **required** distance in kilometers, while the letter "M" in the next column follows the **available clear space** (or lack of it) in kilometers. Minimum separation distances when displayed are taken from Sec 73.207 of the rules as amended. Canadian and Mexican separation distances, U/D ratios and protected contour values are from the US/Mexican Working Agreement and the US/Canada Working Agreement".

The call letters of stations meeting the minimum separation distances under the rules will be flagged by the characters "<<" appended to the right-hand side of the call sign. The "^" character appended to the call sign means the station has been "max-classed" according to the provisions of section 73.525 of the Rules.

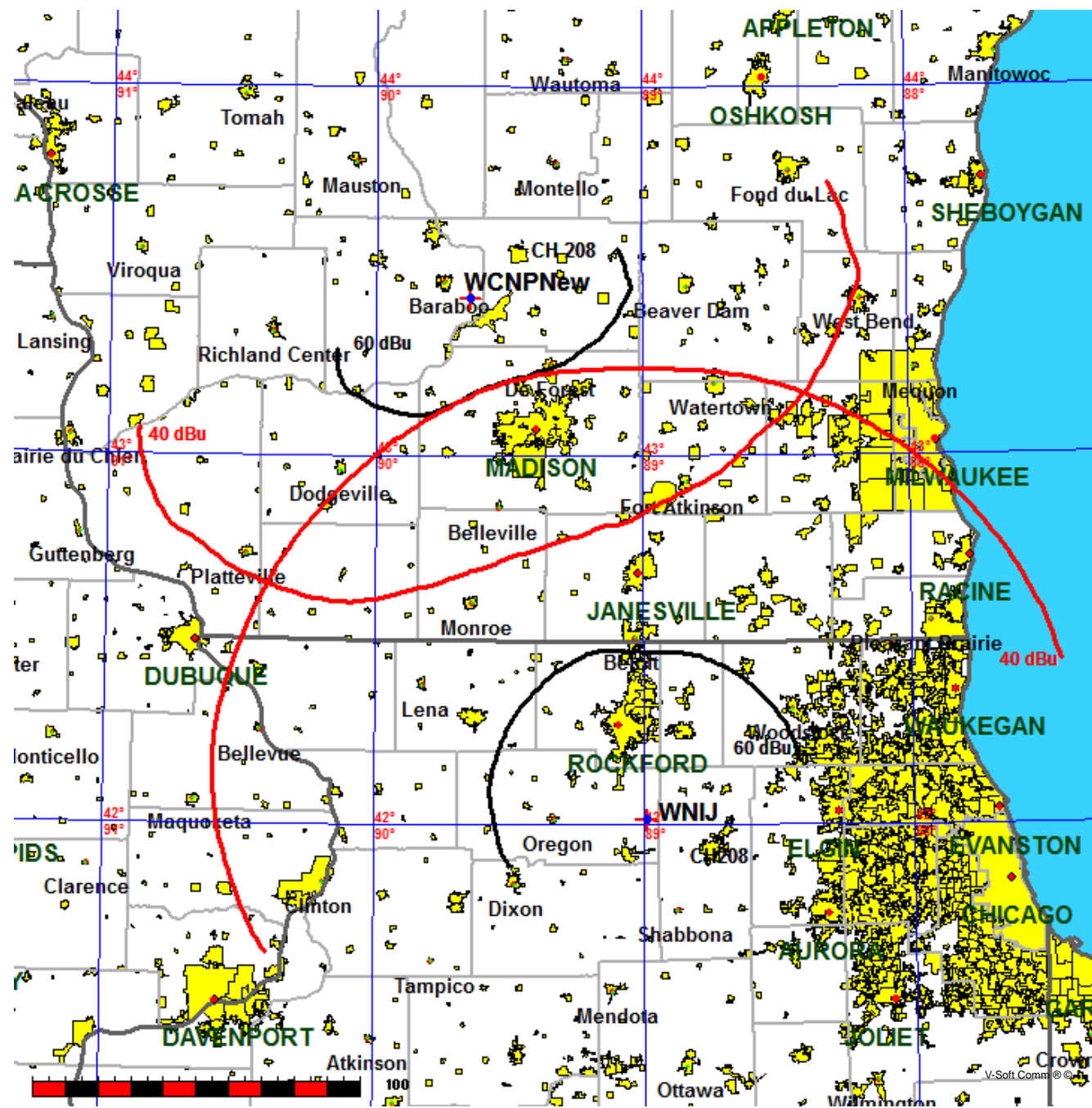
The first three letters of the "TYPE" column identify the current FCC status of the stations. The fourth letter will be a "D" if the facility is directional. "Z" indicates a 73.215 directional. An "N" indicates it is a 73.215 station that operates with an omni-directional antenna. The fifth letter will be an E, H or V depending on the type of antenna polarization. The sixth letter will be a "Y" if the antenna uses beam tilt or an "X" if the commission is not sure, otherwise it will be an "N" or left blank.

WCNPNew vs. WNIJ  
Liberty And Freedom Inc.

FMCommander Single Allocation Study - 05-26-2011 - FCC NGDC 30 Sec  
WCNPNew's Overlaps (In= 0.04 km, Out= 34.7 km)

WCNPNew CH 208 B DA  
Lat= 43 25 40.3, Lng= 89 39 06.5  
6.5 kW 321.3 M HAAT, 610.2 M COR  
Prot.= 60 dBu, Intef.= 40 dBu

WNIJ CH 208 B DA BLED19891011KA  
Lat= 42 00 55.0, Lng= 89 00 07.0  
50.0 kW 128 M HAAT, 380 M COR  
Prot.= 60 dBu, Intef.= 40 dBu

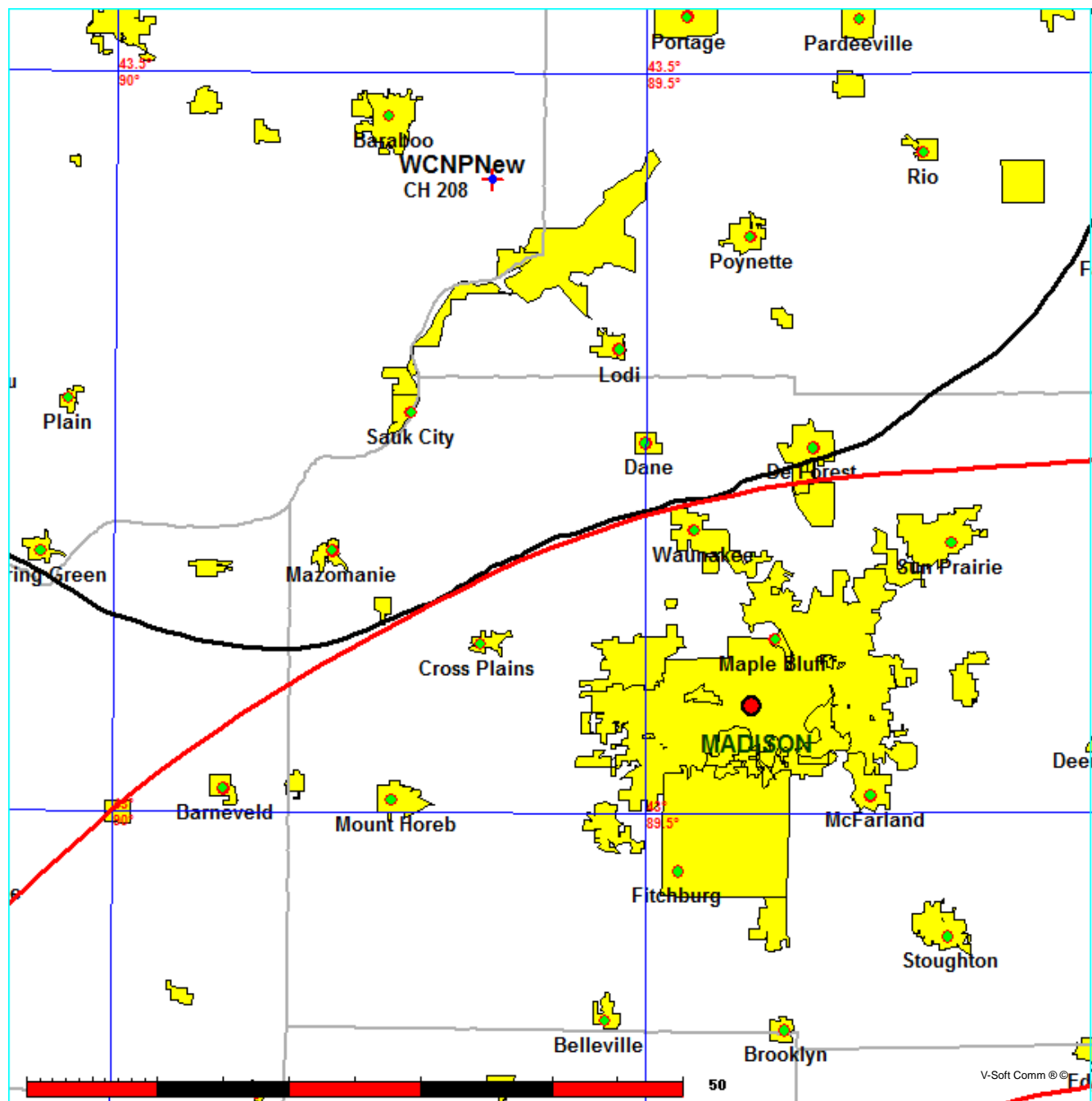


WCNPNew vs. WNIJ (Detail)  
Liberty And Freedom Inc.

FMCommander Single Allocation Study - 05-26-2011 - FCC NGDC 30 Sec  
WCNPNew's Overlaps (In= 0.04 km, Out= 34.7 km)

WCNPNew CH 208 B DA  
Lat= 43 25 40.3, Lng= 89 39 06.5  
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WNIJ CH 208 B DA BLED19891011KA  
Lat= 42 00 55.0, Lng= 89 00 07.0  
50.0 kW 128 M HAAT, 380 M COR  
Prot.= 60 dBu, Intef.= 40 dBu



05-26-2011

Terrain Data: FCC NGDC 30 Sec

FMOver Analysis

WCNPNNew

WNIJ BLED19891011KA

Channel = 208B

Max ERP = 6.5 kW

RCAMSL = 610.2 M

N. Lat. 43 25 40.3

W. Lng. 89 39 06.5

Protected

60 dBu

Channel = 208B

Max ERP = 50 kW

RCAMSL = 380 M

N. Lat. 42 00 55.0

W. Lng. 89 00 07.0

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
101.0	003.3624	0348.0	043.4	356.0	050.0000	0136.8	149.1	37.55	
102.0	003.2111	0348.6	043.0	355.7	050.0000	0136.9	148.5	37.66	
103.0	003.0665	0349.9	042.7	355.5	050.0000	0137.0	147.9	37.76	
104.0	002.9285	0351.1	042.4	355.3	050.0000	0137.0	147.3	37.87	
105.0	002.7967	0351.5	042.0	355.1	050.0000	0137.1	146.7	37.97	
106.0	002.6708	0351.0	041.6	354.9	050.0000	0137.2	146.2	38.07	
107.0	002.5506	0350.3	041.2	354.6	050.0000	0137.3	145.6	38.16	
108.0	002.4358	0349.3	040.8	354.4	050.0000	0137.4	145.1	38.25	
109.0	002.3262	0348.2	040.4	354.1	050.0000	0137.5	144.7	38.34	
110.0	002.2215	0346.2	039.9	353.8	050.0000	0137.7	144.3	38.42	
111.0	002.1215	0343.2	039.4	353.5	050.0000	0138.0	143.9	38.50	
112.0	002.0260	0339.4	038.8	353.2	050.0000	0138.3	143.5	38.57	
113.0	001.9349	0336.3	038.3	352.9	050.0000	0138.6	143.2	38.64	
114.0	001.8478	0334.3	037.8	352.6	050.0000	0139.0	142.9	38.71	
115.0	001.7646	0333.2	037.4	352.3	050.0000	0139.3	142.5	38.78	
116.0	001.6852	0333.2	037.0	352.0	050.0000	0139.7	142.2	38.86	
117.0	001.6093	0334.3	036.7	351.8	050.0000	0140.1	141.8	38.93	
118.0	001.5369	0336.1	036.5	351.5	050.0000	0140.5	141.5	39.01	
119.0	001.4677	0337.9	036.2	351.3	050.0000	0140.8	141.1	39.09	
120.0	001.4017	0339.2	035.9	351.1	050.0000	0141.2	140.8	39.16	
121.0	001.3386	0340.9	035.7	350.8	050.0000	0141.6	140.5	39.23	
122.0	001.2783	0343.4	035.4	350.6	050.0000	0142.0	140.2	39.30	
123.0	001.2208	0346.1	035.2	350.3	050.0000	0142.3	139.9	39.37	
124.0	001.1659	0348.1	035.0	350.1	050.0000	0142.8	139.6	39.44	
125.0	001.1134	0348.9	034.6	349.8	050.0000	0143.2	139.4	39.49	
126.0	001.0633	0348.4	034.3	349.5	050.0000	0143.7	139.3	39.53	
127.0	001.0154	0347.1	033.8	349.3	050.0000	0144.1	139.2	39.56	
128.0	000.9697	0345.9	033.4	349.0	050.0000	0144.6	139.1	39.59	
129.0	000.9261	0345.1	033.0	348.7	050.0000	0145.1	139.0	39.61	
130.0	000.8844	0344.7	032.6	348.4	050.0000	0145.6	139.0	39.64	
131.0	000.8446	0344.3	032.3	348.1	050.0000	0146.1	138.9	39.66	
132.0	000.8066	0344.5	031.9	347.8	050.0000	0146.6	138.9	39.69	
133.0	000.7703	0345.1	031.6	347.6	050.0000	0147.1	138.8	39.71	
134.0	000.7356	0346.1	031.3	347.3	050.0000	0147.6	138.7	39.73	
135.0	000.7025	0347.4	031.0	347.1	050.0000	0148.0	138.7	39.76	
136.0	000.6709	0348.6	030.7	346.8	050.0000	0148.3	138.6	39.77	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
137.0	000.6407	0349.6	030.4	346.6	050.0000	0148.7	138.6	39.78
138.0	000.6119	0350.6	030.1	346.3	050.0000	0148.9	138.6	39.79
139.0	000.5843	0352.2	029.9	346.1	050.0000	0149.2	138.6	39.80
140.0	000.5580	0354.6	029.7	345.9	050.0000	0149.4	138.6	39.81
141.0	000.5535	0356.7	029.7	345.7	050.0000	0149.5	138.3	39.86
142.0	000.5489	0357.3	029.6	345.5	050.0000	0149.7	138.2	39.90
143.0	000.5444	0356.1	029.5	345.3	050.0000	0149.8	138.1	39.93
144.0	000.5399	0353.7	029.4	345.0	050.0000	0150.0	138.0	39.94
145.0	000.5354	0350.8	029.2	344.8	050.0000	0150.1	138.0	39.94
146.0	000.5309	0347.5	029.0	344.6	050.0000	0150.3	138.1	39.94
147.0	000.5265	0343.1	028.7	344.4	050.0000	0150.5	138.1	39.93
148.0	000.5221	0337.6	028.4	344.1	050.0000	0150.7	138.3	39.91
149.0	000.5176	0332.5	028.2	343.9	050.0000	0151.0	138.4	39.89
150.0	000.5132	0329.2	028.0	343.7	050.0000	0151.2	138.5	39.88
151.0	000.5074	0328.0	027.8	343.5	050.0000	0151.5	138.5	39.89
152.0	000.5016	0328.4	027.8	343.3	050.0000	0151.8	138.5	39.90
153.0	000.4959	0329.3	027.7	343.1	050.0000	0152.1	138.4	39.92
154.0	000.4901	0329.9	027.7	342.9	050.0000	0152.3	138.4	39.93
155.0	000.4844	0329.7	027.6	342.7	050.0000	0152.6	138.4	39.93
156.0	000.4788	0328.8	027.5	342.5	050.0000	0152.8	138.5	39.93
157.0	000.4731	0327.6	027.4	342.3	050.0000	0153.0	138.5	39.92
158.0	000.4676	0327.1	027.3	342.1	050.0000	0153.1	138.6	39.91
159.0	000.4620	0328.0	027.2	341.9	050.0000	0153.2	138.6	39.91
160.0	000.4565	0329.3	027.2	341.7	050.0000	0153.3	138.6	39.91
161.0	000.4544	0329.9	027.2	341.5	050.0000	0153.4	138.6	39.92
162.0	000.4523	0330.4	027.2	341.3	050.0000	0153.4	138.6	39.91
163.0	000.4503	0331.6	027.2	341.1	050.0000	0153.4	138.6	39.92
164.0	000.4482	0333.6	027.3	340.9	050.0000	0153.4	138.6	39.92
165.0	000.4462	0335.9	027.3	340.7	050.0000	0153.3	138.5	39.93
166.0	000.4441	0337.7	027.4	340.5	050.0000	0153.3	138.5	39.93
167.0	000.4421	0339.2	027.4	340.3	050.0000	0153.2	138.6	39.92
168.0	000.4401	0339.4	027.4	340.2	050.0000	0153.2	138.6	39.90
169.0	000.4380	0339.2	027.3	340.0	050.0000	0153.2	138.7	39.88
170.0	000.4360	0338.6	027.3	339.8	050.0000	0153.2	138.9	39.86
171.0	000.4462	0338.8	027.4	339.6	050.0000	0153.1	138.8	39.87
172.0	000.4565	0339.8	027.6	339.4	050.0000	0153.1	138.7	39.88
173.0	000.4669	0340.7	027.8	339.2	050.0000	0153.1	138.7	39.90
174.0	000.4774	0341.8	028.0	338.9	050.0000	0153.1	138.6	39.91
175.0	000.4880	0343.0	028.2	338.7	050.0000	0153.1	138.5	39.92
176.0	000.4987	0344.4	028.4	338.5	050.0000	0153.1	138.5	39.93
177.0	000.5096	0345.1	028.6	338.3	050.0000	0153.0	138.5	39.93
178.0	000.5206	0345.9	028.8	338.1	050.0000	0153.0	138.5	39.93
179.0	000.5317	0347.0	029.0	337.9	050.0000	0152.9	138.5	39.93
180.0	000.5429	0347.2	029.1	337.6	050.0000	0152.7	138.5	39.92
181.0	000.5722	0346.8	029.5	337.4	050.0000	0152.6	138.4	39.94
182.0	000.6023	0346.4	029.8	337.1	050.0000	0152.4	138.3	39.95
183.0	000.6331	0345.4	030.1	336.9	050.0000	0152.1	138.2	39.96
184.0	000.6648	0345.1	030.5	336.6	050.0000	0151.9	138.2	39.96
185.0	000.6972	0344.9	030.8	336.4	050.0000	0151.7	138.1	39.96
186.0	000.7303	0346.8	031.3	336.1	050.0000	0151.4	138.0	39.98
187.0	000.7643	0348.7	031.7	335.8	050.0000	0151.1	137.9	39.99

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
188.0	000.7990	0349.6	032.1	335.5	050.0000	0150.9	137.9	39.99
189.0	000.8345	0348.9	032.4	335.3	050.0000	0150.6	137.9	39.98
190.0	000.8707	0348.3	032.7	335.0	050.0000	0150.5	138.0	39.95
191.0	000.9185	0347.8	033.1	334.7	050.0000	0150.3	138.0	39.95
192.0	000.9617	0348.0	033.5	334.4	050.0000	0150.1	138.1	39.93
193.0	001.0071	0349.6	033.9	334.1	050.0000	0149.9	138.1	39.92
194.0	001.0545	0351.3	034.3	333.8	050.0000	0149.8	138.1	39.91
195.0	001.1042	0353.7	034.8	333.5	050.0000	0149.7	138.2	39.90
196.0	001.1563	0356.4	035.3	333.2	050.0000	0149.6	138.2	39.89
197.0	001.2108	0359.7	035.8	332.9	050.0000	0149.5	138.3	39.87
198.0	001.2678	0362.7	036.3	332.5	050.0000	0149.4	138.4	39.85
199.0	001.3276	0365.3	036.8	332.2	050.0000	0149.4	138.5	39.83
200.0	001.3901	0367.0	037.2	331.9	050.0000	0149.3	138.7	39.79
201.0	001.4557	0368.0	037.6	331.6	050.0000	0149.3	138.9	39.75
202.0	001.5243	0368.5	038.0	331.3	050.0000	0149.2	139.2	39.69
203.0	001.5961	0368.1	038.4	331.0	050.0000	0149.2	139.5	39.63
204.0	001.6713	0367.0	038.7	330.8	050.0000	0149.1	139.8	39.56
205.0	001.7501	0365.6	039.0	330.5	050.0000	0149.0	140.2	39.49
206.0	001.8326	0364.2	039.3	330.2	050.0000	0149.0	140.6	39.41
207.0	001.9189	0362.9	039.6	330.0	050.0000	0148.9	141.0	39.33
208.0	002.0094	0361.5	039.9	329.7	050.0000	0148.8	141.4	39.25
209.0	002.1041	0359.7	040.2	329.5	050.0000	0148.8	141.9	39.16
210.0	002.2032	0357.6	040.4	329.3	050.0000	0148.7	142.4	39.07
211.0	002.3071	0355.6	040.7	329.1	050.0000	0148.7	142.9	38.97
212.0	002.4158	0353.8	041.0	328.8	050.0000	0148.6	143.4	38.88
213.0	002.5296	0351.9	041.2	328.6	050.0000	0148.6	143.9	38.78
214.0	002.6489	0350.0	041.5	328.4	050.0000	0148.5	144.4	38.68
215.0	002.7737	0348.0	041.8	328.2	050.0000	0148.5	145.0	38.58
216.0	002.9044	0346.1	042.1	328.0	050.0000	0148.4	145.6	38.47
217.0	003.0413	0344.2	042.3	327.8	050.0000	0148.4	146.2	38.37
218.0	003.1846	0342.4	042.6	327.6	050.0000	0148.3	146.8	38.26
219.0	003.3347	0340.7	042.9	327.4	050.0000	0148.3	147.4	38.16
220.0	003.4919	0339.3	043.2	327.2	050.0000	0148.2	148.0	38.05

05-26-2011

Terrain Data: FCC NGDC 30 Sec

FMOver Analysis

WNIJ BLED19891011KA

WCNPNew

Channel = 208B

Max ERP = 50 kW

RCAMSL = 380 M

N. Lat. 42 00 55.0

W. Lng. 89 00 07.0

Protected

60 dBu

Channel = 208B

Max ERP = 6.5 kW

RCAMSL = 610.2 M

N. Lat. 43 25 40.3

W. Lng. 89 39 06.5

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
282.0	050.0000	0127.4	049.0	177.9	000.5198	0345.9	146.9	22.83	
283.0	050.0000	0127.5	049.1	177.9	000.5191	0345.8	146.1	22.98	
284.0	050.0000	0127.7	049.1	177.8	000.5183	0345.8	145.3	23.14	
285.0	050.0000	0128.5	049.2	177.7	000.5177	0345.7	144.4	23.30	
286.0	050.0000	0129.3	049.3	177.7	000.5170	0345.7	143.6	23.46	
287.0	050.0000	0129.9	049.4	177.6	000.5161	0345.6	142.7	23.62	
288.0	050.0000	0130.2	049.4	177.5	000.5151	0345.5	141.9	23.78	
289.0	050.0000	0130.2	049.4	177.4	000.5137	0345.4	141.1	23.93	
290.0	050.0000	0130.2	049.4	177.2	000.5122	0345.3	140.3	24.09	
291.0	050.0000	0130.4	049.5	177.1	000.5108	0345.2	139.5	24.25	
292.0	050.0000	0131.1	049.6	177.0	000.5096	0345.1	138.7	24.41	
293.0	050.0000	0131.9	049.7	176.9	000.5084	0345.0	137.8	24.59	
294.0	050.0000	0132.5	049.8	176.8	000.5070	0345.0	137.0	24.75	
295.0	050.0000	0132.9	049.8	176.6	000.5054	0345.0	136.2	24.92	
296.0	050.0000	0133.2	049.9	176.5	000.5036	0344.9	135.4	25.08	
297.0	050.0000	0133.6	049.9	176.3	000.5019	0344.8	134.6	25.24	
298.0	050.0000	0134.2	050.0	176.1	000.5001	0344.6	133.9	25.40	
299.0	050.0000	0135.0	050.1	176.0	000.4984	0344.4	133.1	25.56	
300.0	050.0000	0135.8	050.2	175.8	000.4965	0344.1	132.3	25.72	
301.0	050.0000	0136.6	050.4	175.6	000.4947	0343.8	131.5	25.87	
302.0	050.0000	0137.5	050.5	175.4	000.4927	0343.5	130.7	26.03	
303.0	050.0000	0138.5	050.6	175.3	000.4907	0343.3	129.9	26.19	
304.0	050.0000	0139.3	050.7	175.1	000.4886	0343.0	129.1	26.34	
305.0	050.0000	0139.9	050.8	174.8	000.4862	0342.7	128.4	26.48	
306.0	050.0000	0140.2	050.9	174.6	000.4836	0342.4	127.7	26.61	
307.0	050.0000	0140.2	050.9	174.3	000.4807	0342.1	127.0	26.73	
308.0	050.0000	0140.3	050.9	174.0	000.4779	0341.8	126.4	26.85	
309.0	050.0000	0140.5	050.9	173.8	000.4750	0341.5	125.7	26.96	
310.0	050.0000	0140.8	050.9	173.5	000.4720	0341.2	125.1	27.08	
311.0	050.0000	0140.9	051.0	173.2	000.4690	0340.9	124.5	27.18	
312.0	050.0000	0141.0	051.0	172.9	000.4658	0340.5	123.9	27.28	
313.0	050.0000	0141.1	051.0	172.6	000.4625	0340.2	123.3	27.37	
314.0	050.0000	0141.3	051.0	172.3	000.4593	0340.0	122.7	27.47	



Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
315.0	050.0000	0141.6	051.1	172.0	000.4560	0339.7	122.1	27.56
316.0	050.0000	0141.8	051.1	171.6	000.4525	0339.4	121.6	27.65
317.0	050.0000	0141.9	051.1	171.3	000.4490	0339.0	121.0	27.72
318.0	050.0000	0142.2	051.1	170.9	000.4455	0338.8	120.5	27.80
319.0	050.0000	0142.6	051.2	170.6	000.4420	0338.6	120.0	27.89
320.0	050.0000	0143.1	051.3	170.2	000.4385	0338.5	119.4	27.97
321.0	050.0000	0143.8	051.4	169.9	000.4362	0338.6	118.9	28.08
322.0	050.0000	0144.6	051.5	169.5	000.4370	0338.8	118.4	28.22
323.0	050.0000	0145.8	051.6	169.2	000.4377	0339.1	117.8	28.37
324.0	050.0000	0147.0	051.8	168.8	000.4384	0339.3	117.3	28.52
325.0	050.0000	0147.6	051.9	168.4	000.4392	0339.3	116.9	28.64
326.0	050.0000	0147.9	051.9	168.0	000.4400	0339.4	116.5	28.74
327.0	050.0000	0148.2	052.0	167.6	000.4409	0339.4	116.1	28.84
328.0	050.0000	0148.4	052.0	167.2	000.4417	0339.3	115.8	28.93
329.0	050.0000	0148.7	052.0	166.8	000.4426	0339.0	115.4	29.00
330.0	050.0000	0148.9	052.1	166.3	000.4434	0338.3	115.1	29.06
331.0	050.0000	0149.2	052.1	165.9	000.4443	0337.5	114.9	29.11
332.0	050.0000	0149.3	052.1	165.5	000.4452	0336.8	114.6	29.15
333.0	050.0000	0149.5	052.1	165.0	000.4461	0335.9	114.4	29.18
334.0	050.0000	0149.9	052.2	164.6	000.4470	0334.9	114.2	29.20
335.0	050.0000	0150.5	052.3	164.1	000.4479	0333.9	113.9	29.22
336.0	050.0000	0151.3	052.4	163.7	000.4489	0332.9	113.7	29.25
337.0	050.0000	0152.2	052.5	163.2	000.4498	0332.1	113.4	29.29
338.0	050.0000	0152.9	052.6	162.8	000.4507	0331.3	113.3	29.31
339.0	050.0000	0153.1	052.6	162.3	000.4517	0330.6	113.2	29.32
340.0	050.0000	0153.2	052.6	161.9	000.4526	0330.3	113.1	29.32
341.0	050.0000	0153.4	052.6	161.4	000.4536	0330.1	113.1	29.34
342.0	050.0000	0153.2	052.6	160.9	000.4546	0329.9	113.1	29.33
343.0	050.0000	0152.2	052.5	160.5	000.4555	0329.7	113.2	29.29
344.0	050.0000	0150.9	052.3	160.0	000.4565	0329.3	113.5	29.23
345.0	050.0000	0150.0	052.2	159.5	000.4590	0328.7	113.6	29.19
346.0	050.0000	0149.3	052.1	159.1	000.4615	0328.1	113.8	29.14
347.0	050.0000	0148.1	051.9	158.6	000.4640	0327.5	114.1	29.07
348.0	050.0000	0146.3	051.7	158.2	000.4664	0327.2	114.5	28.99
349.0	050.0000	0144.5	051.5	157.8	000.4687	0327.1	114.9	28.90
350.0	050.0000	0142.9	051.2	157.4	000.4711	0327.3	115.3	28.83
351.0	050.0000	0141.3	051.0	157.0	000.4734	0327.6	115.7	28.77
352.0	050.0000	0139.7	050.8	156.6	000.4756	0328.1	116.1	28.70
353.0	050.0000	0138.5	050.6	156.2	000.4779	0328.7	116.5	28.64
354.0	050.0000	0137.6	050.5	155.8	000.4801	0329.1	116.9	28.59
355.0	050.0000	0137.2	050.4	155.4	000.4824	0329.5	117.3	28.55
356.0	050.0000	0136.8	050.4	155.0	000.4846	0329.7	117.6	28.49
357.0	050.0000	0136.4	050.3	154.6	000.4868	0329.9	118.0	28.43
358.0	050.0000	0135.4	050.2	154.2	000.4889	0329.9	118.5	28.34
359.0	050.0000	0134.4	050.0	153.8	000.4910	0329.9	118.9	28.24
000.0	050.0000	0133.5	049.9	153.5	000.4930	0329.7	119.4	28.13
001.0	050.0000	0132.8	049.8	153.1	000.4950	0329.4	119.9	28.03
002.0	050.0000	0133.5	049.9	152.8	000.4973	0329.1	120.3	27.96
003.0	050.0000	0134.1	050.0	152.4	000.4995	0328.7	120.6	27.89
004.0	050.0000	0134.6	050.1	152.0	000.5016	0328.4	121.0	27.81
005.0	050.0000	0135.4	050.2	151.6	000.5038	0328.1	121.4	27.73

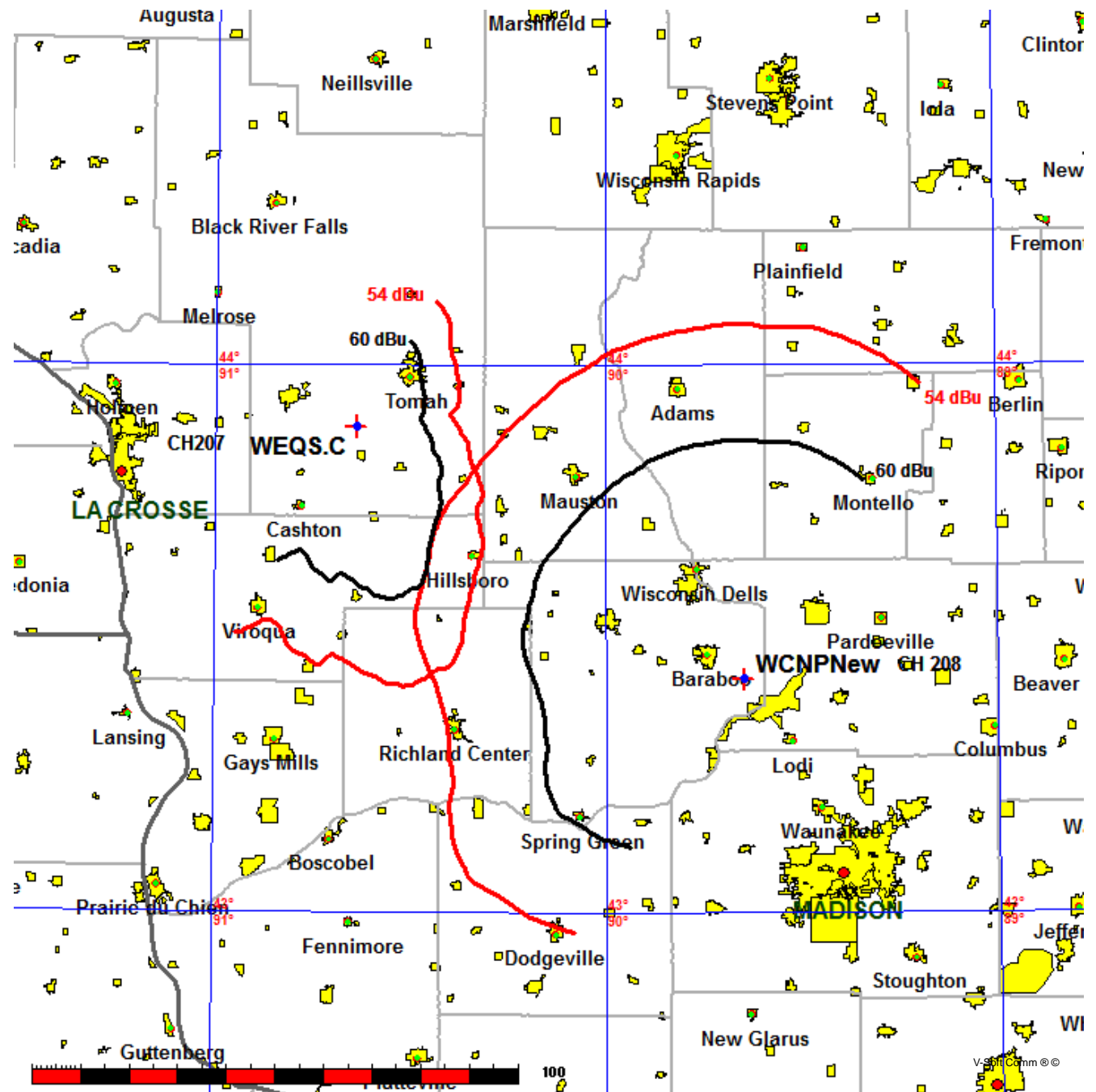
Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
006.0	050.0000	0136.3	050.3	151.2	000.5060	0328.0	121.8	27.66
007.0	050.0000	0137.2	050.4	150.9	000.5082	0328.0	122.1	27.59
008.0	050.0000	0138.1	050.6	150.5	000.5104	0328.4	122.6	27.52
009.0	050.0000	0138.7	050.6	150.1	000.5124	0328.9	123.1	27.45
010.0	050.0000	0139.4	050.7	149.8	000.5142	0329.7	123.5	27.38
011.0	050.0000	0140.3	050.9	149.4	000.5157	0330.7	124.0	27.32
012.0	050.0000	0141.2	051.0	149.1	000.5172	0332.1	124.5	27.27
013.0	050.0000	0141.7	051.1	148.8	000.5186	0333.5	125.1	27.21
014.0	050.0000	0142.2	051.1	148.5	000.5201	0335.1	125.6	27.15
015.0	050.0000	0142.9	051.2	148.1	000.5214	0336.8	126.2	27.08
016.0	050.0000	0143.4	051.3	147.8	000.5228	0338.5	126.8	27.02
017.0	050.0000	0144.0	051.4	147.5	000.5241	0340.2	127.4	26.94
018.0	050.0000	0144.3	051.4	147.3	000.5253	0341.8	128.1	26.85
019.0	050.0000	0144.1	051.4	147.0	000.5264	0343.0	128.8	26.74
020.0	050.0000	0143.7	051.3	146.8	000.5274	0344.1	129.6	26.61
021.0	050.0000	0143.4	051.3	146.6	000.5284	0345.2	130.3	26.48
022.0	050.0000	0143.5	051.3	146.3	000.5294	0346.2	131.0	26.35
023.0	050.0000	0143.8	051.4	146.1	000.5305	0347.2	131.7	26.22
024.0	050.0000	0143.9	051.4	145.9	000.5315	0348.0	132.5	26.08
025.0	050.0000	0144.0	051.4	145.7	000.5324	0348.7	133.3	25.94
026.0	050.0000	0144.3	051.4	145.5	000.5334	0349.4	134.0	25.79
027.0	050.0000	0144.6	051.5	145.2	000.5343	0350.1	134.8	25.64
028.0	050.0000	0144.5	051.5	145.1	000.5351	0350.6	135.6	25.48
029.0	050.0000	0144.1	051.4	144.9	000.5358	0351.1	136.4	25.31
030.0	050.0000	0144.0	051.4	144.8	000.5365	0351.5	137.2	25.14
031.0	050.0000	0144.1	051.4	144.6	000.5372	0352.0	138.0	24.98
032.0	050.0000	0144.3	051.4	144.4	000.5379	0352.5	138.8	24.81
033.0	050.0000	0144.4	051.4	144.3	000.5386	0352.9	139.7	24.65
034.0	050.0000	0144.4	051.4	144.2	000.5392	0353.3	140.5	24.48
035.0	050.0000	0144.4	051.4	144.0	000.5398	0353.6	141.3	24.31
036.0	050.0000	0144.4	051.4	143.9	000.5403	0353.9	142.2	24.15
037.0	050.0000	0144.4	051.4	143.8	000.5408	0354.2	143.0	23.98
038.0	050.0000	0144.4	051.4	143.7	000.5413	0354.5	143.9	23.82
039.0	050.0000	0144.2	051.4	143.6	000.5417	0354.7	144.8	23.66
040.0	050.0000	0143.8	051.4	143.5	000.5420	0354.9	145.7	23.50
041.0	050.0000	0143.5	051.3	143.5	000.5423	0355.1	146.5	23.34

WCNPNew vs. WEQS.C  
Liberty And Freedom Inc.

FMCommander Single Allocation Study - 05-26-2011 - FCC NGDC 30 Sec  
WCNPNew's Overlaps (In= 14.46 km, Out= 0.16 km)

WCNPNew CH 208 B DA  
Lat= 43 25 40.3, Lng= 89 39 06.5  
6.5 kW 321.3 M HAAT, 610.2 M COR  
Prot.= 60 dBu, Intef.= 54 dBu

WEQS-C CH 207 C3 DA BMPED20100323ACR  
Lat= 43 53 09.0, Lng= 90 38 43.0  
7.5 kW 160 M HAAT, 490 M COR  
Prot.= 60 dBu, Intef.= 54 dBu



05-26-2011

Terrain Data: FCC NGDC 30 Sec

FMOver Analysis

WCNPNew

WEQS-C BMPED20100323ACR

Channel = 208B

Max ERP = 6.5 kW

RCAMSL = 610.2 M

N. Lat. 43 25 40.3

W. Lng. 89 39 06.5

Protected

60 dBu

Channel = 207C3

Max ERP = 7.5 kW

RCAMSL = 490 M

N. Lat. 43 53 09.0

W. Lng. 90 38 43.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
243.0	006.5000	0290.7	045.6	151.0	003.3607	0154.3	081.8	41.34	
244.0	006.5000	0286.1	045.3	150.7	003.3149	0153.1	081.0	41.46	
245.0	006.5000	0281.7	045.0	150.5	003.2763	0152.1	080.3	41.60	
246.0	006.5000	0277.6	044.7	150.2	003.2370	0151.1	079.5	41.73	
247.0	006.5000	0272.4	044.4	149.9	003.1898	0150.1	078.8	41.85	
248.0	006.5000	0265.3	044.0	149.5	003.1376	0148.7	078.1	41.94	
249.0	006.5000	0257.3	043.4	149.1	003.0781	0147.4	077.4	42.00	
250.0	006.5000	0250.8	043.0	148.7	003.0260	0146.2	076.7	42.08	
251.0	006.5000	0246.2	042.7	148.3	002.9849	0145.4	076.0	42.19	
252.0	006.5000	0243.9	042.6	148.1	002.9550	0144.8	075.3	42.33	
253.0	006.5000	0243.4	042.6	147.9	002.9346	0144.4	074.6	42.50	
254.0	006.5000	0242.2	042.5	147.7	002.9089	0143.9	073.9	42.66	
255.0	006.5000	0241.3	042.4	147.5	002.8832	0143.6	073.2	42.82	
256.0	006.5000	0240.0	042.3	147.3	002.8536	0143.1	072.5	42.97	
257.0	006.5000	0237.0	042.1	147.0	002.8117	0142.6	071.9	43.08	
258.0	006.5000	0233.8	041.9	146.6	002.7678	0142.1	071.3	43.18	
259.0	006.5000	0232.4	041.8	146.3	002.7325	0141.6	070.7	43.30	
260.0	006.5000	0232.3	041.8	146.1	002.7042	0141.3	070.0	43.46	
261.0	006.5000	0232.6	041.8	145.8	002.6762	0141.1	069.3	43.61	
262.0	006.5000	0233.3	041.9	145.6	002.6496	0140.7	068.6	43.77	
263.0	006.5000	0233.7	041.9	145.4	002.6193	0140.4	068.0	43.92	
264.0	006.5000	0234.9	042.0	145.1	002.5921	0140.0	067.3	44.07	
265.0	006.5000	0238.4	042.2	145.0	002.5766	0139.8	066.5	44.28	
266.0	006.5000	0241.2	042.4	144.8	002.5547	0139.5	065.8	44.46	
267.0	006.5000	0243.6	042.6	144.6	002.5291	0139.1	065.1	44.64	
268.0	006.5000	0246.1	042.7	144.4	002.5017	0138.7	064.4	44.80	
269.0	006.5000	0249.2	042.9	144.1	002.4755	0138.4	063.6	44.98	
270.0	006.5000	0254.6	043.3	144.0	002.4598	0138.3	062.8	45.22	
271.0	006.4727	0259.9	043.6	143.8	002.4389	0138.0	062.0	45.44	
272.0	006.4455	0265.3	043.9	143.6	002.4157	0137.7	061.2	45.67	
273.0	006.4184	0271.6	044.3	143.4	002.3954	0137.4	060.4	45.91	
274.0	006.3913	0278.0	044.6	143.2	002.3727	0137.1	059.5	46.15	
275.0	006.3642	0283.9	045.0	143.0	002.3450	0136.7	058.7	46.38	
276.0	006.3372	0289.7	045.3	142.7	002.3137	0136.4	057.9	46.60	
277.0	006.3103	0294.7	045.6	142.4	002.2755	0136.1	057.2	46.80	
278.0	006.2834	0299.7	045.9	142.0	002.2345	0135.8	056.4	46.99	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
279.0	006.2566	0304.5	046.1	141.6	002.1902	0135.5	055.6	47.18
280.0	006.2299	0308.8	046.3	141.1	002.1402	0135.4	054.9	47.34
281.0	006.1715	0311.5	046.4	140.6	002.0781	0135.5	054.3	47.45
282.0	006.1133	0312.8	046.4	139.9	002.0107	0135.7	053.8	47.51
283.0	006.0555	0313.3	046.4	139.2	001.9512	0136.2	053.4	47.58
284.0	005.9979	0313.4	046.3	138.4	001.8898	0136.5	053.0	47.62
285.0	005.9406	0314.0	046.2	137.7	001.8293	0136.3	052.6	47.62
286.0	005.8836	0316.0	046.3	136.9	001.7725	0136.1	052.1	47.66
287.0	005.8268	0318.6	046.4	136.2	001.7161	0135.7	051.6	47.68
288.0	005.7703	0321.1	046.4	135.4	001.6588	0135.5	051.2	47.70
289.0	005.7141	0323.2	046.5	134.7	001.5996	0135.7	050.8	47.71
290.0	005.6582	0324.6	046.5	133.8	001.5386	0136.2	050.4	47.70
291.0	005.6983	0326.0	046.6	133.0	001.4822	0136.4	050.0	47.73
292.0	005.7385	0327.5	046.8	132.2	001.4254	0135.7	049.5	47.70
293.0	005.7789	0329.1	046.9	131.4	001.3678	0133.7	049.1	47.58
294.0	005.8194	0330.4	047.1	130.5	001.3094	0130.9	048.7	47.39
295.0	005.8601	0331.4	047.2	129.7	001.2549	0128.0	048.3	47.19
296.0	005.9009	0331.8	047.3	128.7	001.2072	0125.4	048.1	46.99
297.0	005.9418	0331.7	047.4	127.8	001.1591	0122.6	047.8	46.76
298.0	005.9829	0331.3	047.4	126.8	001.1111	0119.8	047.6	46.49
299.0	006.0241	0330.4	047.4	125.8	001.0633	0118.0	047.5	46.25
300.0	006.0655	0328.8	047.4	124.8	001.0161	0118.0	047.5	46.07
301.0	006.1083	0326.2	047.3	123.8	000.9696	0119.9	047.5	45.96
302.0	006.1512	0322.9	047.1	122.8	000.9245	0122.8	047.6	45.86
303.0	006.1943	0319.5	047.0	121.8	000.8809	0125.7	047.8	45.76
304.0	006.2375	0317.0	046.9	120.9	000.8388	0128.7	047.9	45.66
305.0	006.2809	0316.0	046.9	119.9	000.7986	0131.3	047.9	45.56
306.0	006.3244	0315.9	046.9	118.9	000.7668	0132.5	048.0	45.44
307.0	006.3681	0315.8	047.0	117.9	000.7357	0132.3	048.0	45.23
308.0	006.4119	0315.3	047.0	117.0	000.7056	0131.2	048.1	44.95
309.0	006.4559	0314.2	047.0	116.0	000.6765	0130.1	048.3	44.64
310.0	006.5000	0313.1	047.0	115.1	000.6484	0129.3	048.5	44.33
311.0	006.5000	0312.3	046.9	114.2	000.6217	0128.6	048.7	44.01
312.0	006.5000	0312.1	046.9	113.3	000.5956	0127.8	049.0	43.68
313.0	006.5000	0312.4	046.9	112.3	000.5701	0126.7	049.3	43.34
314.0	006.5000	0313.1	047.0	111.4	000.5454	0124.4	049.5	42.92
315.0	006.5000	0314.0	047.0	110.5	000.5213	0121.4	049.8	42.46
316.0	006.5000	0314.8	047.1	109.7	000.5091	0118.5	050.1	42.08
317.0	006.5000	0315.2	047.1	108.8	000.5144	0115.6	050.4	41.82
318.0	006.5000	0315.4	047.1	108.0	000.5196	0112.4	050.8	41.52
319.0	006.5000	0315.4	047.1	107.2	000.5246	0109.7	051.2	41.23
320.0	006.5000	0315.5	047.1	106.4	000.5296	0107.6	051.6	40.96
321.0	006.5000	0315.6	047.1	105.7	000.5344	0105.4	052.1	40.68
322.0	006.5000	0315.8	047.2	104.9	000.5392	0103.9	052.6	40.43
323.0	006.5000	0316.1	047.2	104.2	000.5438	0102.8	053.1	40.20
324.0	006.5000	0316.9	047.2	103.5	000.5485	0101.4	053.5	39.97
325.0	006.5000	0318.4	047.3	102.8	000.5532	0099.8	054.0	39.71
326.0	006.5000	0320.5	047.5	102.0	000.5580	0098.1	054.5	39.45
327.0	006.5000	0322.5	047.6	101.3	000.5627	0096.9	054.9	39.22
328.0	006.5000	0323.6	047.7	100.6	000.5670	0096.1	055.5	38.99
329.0	006.5000	0323.8	047.7	100.1	000.5709	0095.1	056.1	38.72

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
330.0	006.5000	0323.4	047.6	099.5	000.5713	0094.3	056.7	38.43
331.0	006.5000	0323.0	047.6	099.0	000.5713	0093.8	057.4	38.16
332.0	006.5000	0323.1	047.6	098.5	000.5713	0093.3	058.0	37.89
333.0	006.5000	0324.1	047.7	098.0	000.5713	0092.3	058.7	37.60
334.0	006.5000	0325.8	047.8	097.4	000.5713	0091.1	059.3	37.30
335.0	006.5000	0328.2	047.9	096.9	000.5713	0089.7	059.9	36.99
336.0	006.5000	0330.5	048.1	096.3	000.5713	0088.2	060.5	36.67
337.0	006.5000	0332.0	048.2	095.9	000.5713	0087.1	061.2	36.37
338.0	006.5000	0332.4	048.2	095.5	000.5713	0086.2	061.9	36.07
339.0	006.5000	0332.2	048.2	095.1	000.5713	0085.3	062.7	35.77
340.0	006.5000	0331.8	048.2	094.8	000.5713	0084.5	063.5	35.48
341.0	006.5000	0331.7	048.2	094.5	000.5713	0083.9	064.2	35.22
342.0	006.5000	0332.0	048.2	094.2	000.5713	0083.2	065.0	34.95
343.0	006.5000	0332.5	048.2	093.9	000.5713	0082.5	065.8	34.69
344.0	006.5000	0333.1	048.3	093.6	000.5713	0081.9	066.5	34.43
345.0	006.5000	0333.8	048.3	093.3	000.5713	0081.4	067.3	34.17
346.0	006.5000	0334.5	048.4	093.1	000.5713	0080.9	068.1	33.92
347.0	006.5000	0334.6	048.4	092.8	000.5713	0080.4	068.9	33.67
348.0	006.5000	0334.2	048.3	092.7	000.5713	0080.1	069.7	33.42
349.0	006.5000	0333.4	048.3	092.5	000.5713	0079.8	070.5	33.17
350.0	006.5000	0332.8	048.2	092.4	000.5713	0079.6	071.4	32.93
351.0	006.5000	0332.5	048.2	092.3	000.5713	0079.4	072.2	32.69
352.0	006.5000	0332.6	048.2	092.1	000.5713	0079.2	073.0	32.45
353.0	006.5000	0333.3	048.3	092.0	000.5713	0078.9	073.8	32.22
354.0	006.5000	0334.0	048.3	091.8	000.5713	0078.7	074.6	31.98
355.0	006.5000	0334.7	048.4	091.7	000.5713	0078.6	075.5	31.76
356.0	006.5000	0335.4	048.4	091.6	000.5713	0078.6	076.3	31.53
357.0	006.5000	0335.9	048.4	091.5	000.5713	0078.6	077.1	31.31
358.0	006.5000	0336.0	048.4	091.5	000.5713	0078.6	078.0	31.08
359.0	006.5000	0335.8	048.4	091.4	000.5713	0078.6	078.8	30.86
000.0	006.5000	0335.6	048.4	091.4	000.5713	0078.6	079.7	30.63
001.0	006.5000	0334.8	048.4	091.4	000.5713	0078.6	080.5	30.41
002.0	006.5000	0333.4	048.3	091.5	000.5713	0078.6	081.3	30.19

05-26-2011

Terrain Data: FCC NGDC 30 Sec

FMOver Analysis

WEQS-C BMPED20100323ACR

WCNPNew

Channel = 207C3

Max ERP = 7.5 kW

RCAMSL = 490 M

N. Lat. 43 53 09.0

W. Lng. 90 38 43.0

Protected

60 dBu

Channel = 208B

Max ERP = 6.5 kW

RCAMSL = 610.2 M

N. Lat. 43 25 40.3

W. Lng. 89 39 06.5

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
062.0	000.2376	0146.1	015.4	311.5	006.5000	0312.1	088.2	47.78	
063.0	000.2376	0144.2	015.3	311.4	006.5000	0312.1	088.0	47.85	
064.0	000.2376	0142.7	015.2	311.3	006.5000	0312.2	087.8	47.91	
065.0	000.2376	0141.8	015.2	311.2	006.5000	0312.2	087.6	47.99	
066.0	000.2376	0141.3	015.1	311.1	006.5000	0312.2	087.3	48.06	
067.0	000.2376	0140.9	015.1	311.0	006.5000	0312.3	087.1	48.13	
068.0	000.2376	0139.6	015.0	310.9	006.5000	0312.4	086.9	48.20	
069.0	000.2376	0137.5	014.9	310.7	006.5000	0312.5	086.7	48.25	
070.0	000.2376	0134.4	014.7	310.5	006.5000	0312.6	086.6	48.30	
071.0	000.2501	0130.3	014.7	310.4	006.5000	0312.7	086.4	48.37	
072.0	000.2628	0126.0	014.6	310.3	006.5000	0312.8	086.2	48.43	
073.0	000.2759	0121.3	014.5	310.2	006.5000	0312.9	086.1	48.49	
074.0	000.2893	0117.1	014.4	310.0	006.5000	0313.0	085.9	48.54	
075.0	000.3030	0113.2	014.4	309.9	006.4947	0313.2	085.7	48.60	
076.0	000.3170	0109.7	014.3	309.7	006.4887	0313.3	085.6	48.65	
077.0	000.3314	0106.5	014.2	309.6	006.4830	0313.4	085.4	48.70	
078.0	000.3460	0103.5	014.2	309.5	006.4771	0313.6	085.2	48.75	
079.0	000.3610	0100.2	014.1	309.3	006.4704	0313.8	085.1	48.80	
080.0	000.3763	0095.8	013.9	309.1	006.4617	0314.0	085.0	48.82	
081.0	000.3940	0090.8	013.7	308.9	006.4521	0314.3	085.0	48.84	
082.0	000.4121	0085.5	013.5	308.7	006.4418	0314.6	085.0	48.84	
083.0	000.4306	0080.1	013.2	308.4	006.4312	0314.8	085.0	48.83	
084.0	000.4495	0077.2	013.1	308.3	006.4243	0315.0	084.9	48.86	
085.0	000.4688	0076.5	013.2	308.2	006.4209	0315.1	084.7	48.93	
086.0	000.4885	0076.0	013.2	308.1	006.4176	0315.1	084.5	49.00	
087.0	000.5086	0076.2	013.4	308.1	006.4152	0315.2	084.2	49.08	
088.0	000.5291	0077.0	013.6	308.0	006.4135	0315.2	083.9	49.18	
089.0	000.5500	0077.5	013.8	308.0	006.4111	0315.3	083.7	49.27	
090.0	000.5713	0078.0	013.9	307.9	006.4085	0315.4	083.4	49.36	
091.0	000.5713	0078.5	014.0	307.8	006.4034	0315.5	083.2	49.42	
092.0	000.5713	0078.9	014.0	307.7	006.3981	0315.6	083.0	49.48	
093.0	000.5713	0080.8	014.2	307.6	006.3947	0315.6	082.8	49.56	
094.0	000.5713	0082.8	014.4	307.5	006.3913	0315.6	082.5	49.66	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
095.0	000.5713	0085.0	014.5	307.5	006.3879	0315.7	082.2	49.75
096.0	000.5713	0087.4	014.8	307.4	006.3848	0315.7	081.8	49.86
097.0	000.5713	0090.1	015.0	307.3	006.3815	0315.7	081.5	49.96
098.0	000.5713	0092.4	015.2	307.2	006.3776	0315.8	081.2	50.06
099.0	000.5713	0093.8	015.3	307.1	006.3722	0315.8	081.0	50.14
100.0	000.5713	0095.0	015.5	307.0	006.3663	0315.8	080.7	50.21
101.0	000.5647	0096.5	015.6	306.8	006.3600	0315.9	080.5	50.27
102.0	000.5581	0098.1	015.6	306.7	006.3535	0315.9	080.3	50.33
103.0	000.5516	0100.4	015.8	306.5	006.3477	0315.9	080.1	50.42
104.0	000.5451	0102.4	015.9	306.4	006.3412	0315.9	079.9	50.49
105.0	000.5387	0104.0	016.0	306.2	006.3341	0315.9	079.7	50.54
106.0	000.5323	0106.3	016.2	306.1	006.3275	0315.9	079.4	50.62
107.0	000.5259	0109.2	016.4	305.9	006.3210	0315.9	079.1	50.71
108.0	000.5196	0112.4	016.6	305.8	006.3145	0315.9	078.8	50.80
109.0	000.5133	0116.2	016.9	305.6	006.3079	0315.8	078.5	50.91
110.0	000.5070	0119.6	017.1	305.5	006.3005	0315.9	078.2	50.99
111.0	000.5335	0122.9	017.6	305.3	006.2949	0315.9	077.7	51.17
112.0	000.5606	0126.0	018.0	305.2	006.2885	0315.9	077.2	51.34
113.0	000.5884	0127.5	018.4	305.0	006.2808	0316.0	076.8	51.48
114.0	000.6169	0128.5	018.7	304.8	006.2722	0316.1	076.4	51.60
115.0	000.6461	0129.2	018.9	304.6	006.2632	0316.2	076.1	51.71
116.0	000.6759	0130.1	019.2	304.4	006.2537	0316.4	075.8	51.82
117.0	000.7064	0131.3	019.5	304.1	006.2439	0316.7	075.4	51.94
118.0	000.7376	0132.4	019.8	303.9	006.2336	0317.1	075.1	52.06
119.0	000.7694	0132.5	020.0	303.7	006.2228	0317.7	074.9	52.15
120.0	000.8020	0131.1	020.1	303.4	006.2114	0318.4	074.7	52.21
121.0	000.8442	0128.4	020.2	303.1	006.1998	0319.1	074.7	52.25
122.0	000.8875	0125.3	020.2	302.9	006.1882	0319.9	074.6	52.28
123.0	000.9319	0122.3	020.2	302.6	006.1765	0320.8	074.6	52.31
124.0	000.9774	0119.6	020.3	302.3	006.1648	0321.8	074.6	52.34
125.0	001.0240	0117.8	020.4	302.0	006.1529	0322.7	074.5	52.39
126.0	001.0716	0118.2	020.6	301.8	006.1405	0323.7	074.3	52.50
127.0	001.1204	0120.3	021.0	301.4	006.1272	0324.7	073.9	52.65
128.0	001.1702	0123.3	021.4	301.1	006.1132	0325.8	073.5	52.82
129.0	001.2211	0126.2	021.9	300.8	006.0986	0326.8	073.2	52.97
130.0	001.2731	0129.0	022.3	300.4	006.0834	0327.8	072.8	53.12
131.0	001.3401	0132.3	022.8	300.0	006.0670	0328.7	072.4	53.29
132.0	001.4088	0135.3	023.3	299.6	006.0506	0329.5	072.0	53.45
133.0	001.4792	0136.3	023.7	299.3	006.0348	0330.1	071.7	53.54
134.0	001.5513	0136.0	023.9	298.9	006.0196	0330.6	071.6	53.59
135.0	001.6252	0135.6	024.1	298.5	006.0043	0330.9	071.5	53.62
136.0	001.7007	0135.6	024.4	298.1	005.9885	0331.2	071.4	53.66
137.0	001.7780	0136.1	024.6	297.7	005.9721	0331.5	071.3	53.70
138.0	001.8570	0136.5	024.9	297.3	005.9556	0331.6	071.2	53.73
139.0	001.9378	0136.3	025.1	296.9	005.9395	0331.7	071.2	53.74
140.0	002.0202	0135.7	025.3	296.6	005.9237	0331.8	071.2	53.73
141.0	002.1259	0135.4	025.6	296.1	005.9068	0331.8	071.1	53.73
142.0	002.2342	0135.8	025.9	295.7	005.8889	0331.7	071.0	53.75
143.0	002.3453	0136.7	026.2	295.2	005.8702	0331.6	070.9	53.76
144.0	002.4590	0138.2	026.6	294.8	005.8504	0331.2	070.8	53.78
145.0	002.5755	0139.8	027.0	294.3	005.8304	0330.7	070.7	53.79



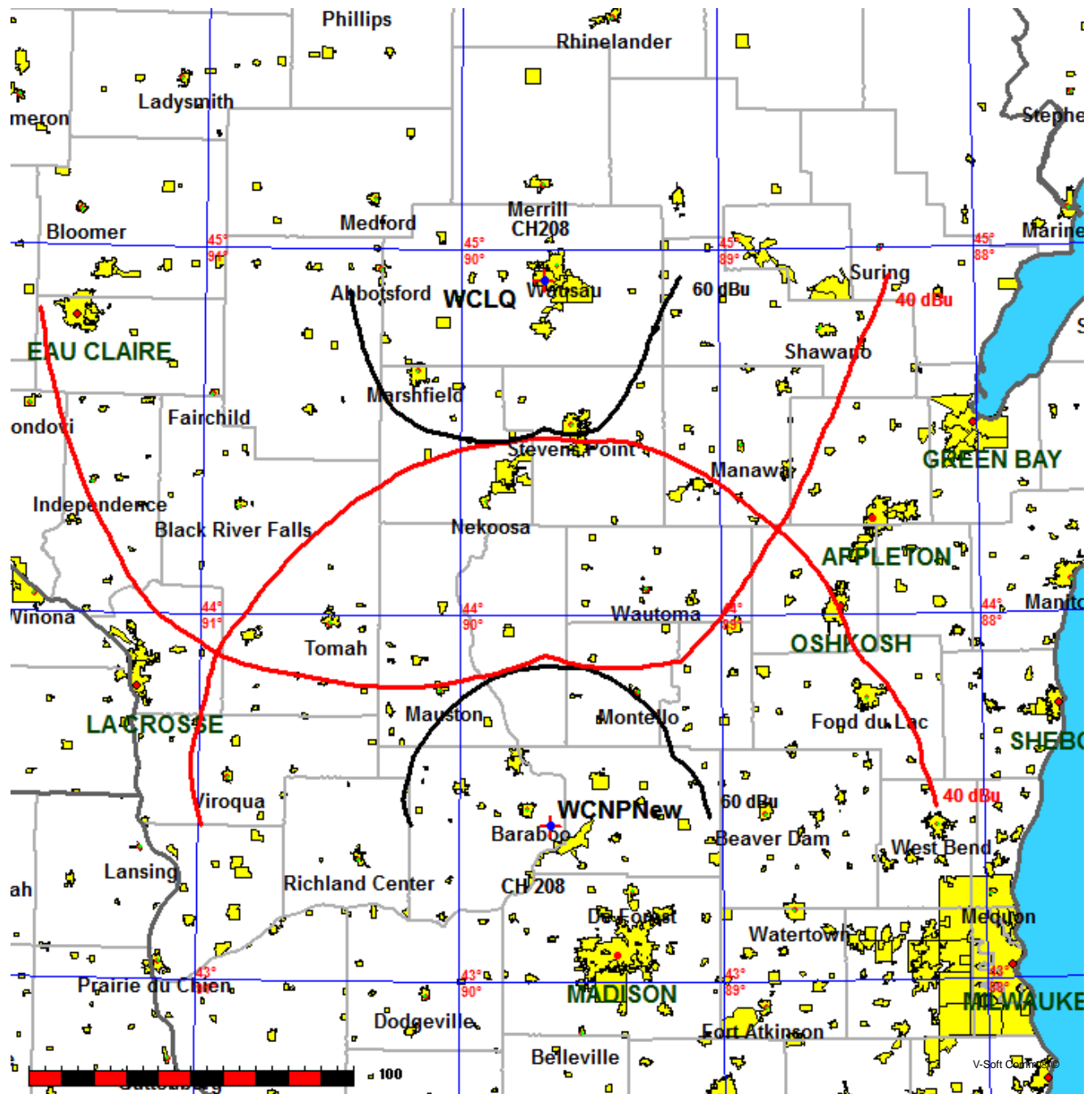
Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
146.0	002.6946	0141.2	027.4	293.8	005.8102	0330.1	070.6	53.79
147.0	002.8164	0142.6	027.8	293.3	005.7899	0329.5	070.5	53.77
148.0	002.9409	0144.5	028.3	292.7	005.7685	0328.7	070.5	53.75
149.0	003.0682	0147.1	028.8	292.2	005.7455	0327.8	070.4	53.74
150.0	003.1981	0150.3	029.3	291.6	005.7210	0326.8	070.2	53.73
151.0	003.3657	0154.4	030.1	290.9	005.6927	0325.8	070.0	53.75
152.0	003.5377	0159.9	030.9	290.1	005.6604	0324.6	069.7	53.80
153.0	003.7140	0165.6	031.9	289.2	005.7030	0323.5	069.4	53.90
154.0	003.8945	0169.8	032.7	288.4	005.7483	0322.0	069.2	53.94
155.0	004.0793	0172.4	033.3	287.7	005.7883	0320.4	069.2	53.92
156.0	004.2684	0174.7	033.9	287.0	005.8273	0318.6	069.3	53.87
157.0	004.4618	0177.7	034.6	286.3	005.8685	0316.7	069.3	53.82
158.0	004.6594	0179.7	035.1	285.6	005.9059	0315.1	069.5	53.74
159.0	004.8614	0178.4	035.3	285.2	005.9318	0314.2	069.8	53.60
160.0	005.0676	0174.1	035.3	284.9	005.9460	0313.9	070.4	53.41
161.0	005.2895	0169.2	035.1	284.7	005.9565	0313.7	070.9	53.20
162.0	005.5161	0166.1	035.2	284.4	005.9729	0313.5	071.4	53.03
163.0	005.7474	0164.9	035.4	284.0	005.9957	0313.4	071.9	52.90
164.0	005.9835	0164.0	035.6	283.6	006.0193	0313.4	072.3	52.77
165.0	006.2244	0162.5	035.8	283.3	006.0393	0313.4	072.7	52.62
166.0	006.4700	0160.3	035.9	283.0	006.0554	0313.3	073.3	52.45
167.0	006.7204	0158.5	036.0	282.7	006.0722	0313.3	073.8	52.28
168.0	006.9755	0156.9	036.1	282.4	006.0889	0313.2	074.3	52.10
169.0	007.2354	0153.9	036.1	282.3	006.0982	0313.1	074.9	51.90
170.0	007.5000	0150.2	035.9	282.2	006.1036	0313.0	075.5	51.69
171.0	007.5000	0145.9	035.4	282.4	006.0929	0313.1	076.3	51.42
172.0	007.5000	0143.7	035.2	282.4	006.0915	0313.1	076.9	51.20
173.0	007.5000	0142.7	035.0	282.3	006.0954	0313.1	077.6	50.99
174.0	007.5000	0139.9	034.7	282.4	006.0903	0313.1	078.2	50.76
175.0	007.5000	0134.6	034.1	282.7	006.0729	0313.3	079.0	50.50
176.0	007.5000	0129.9	033.6	283.0	006.0580	0313.3	079.7	50.25
177.0	007.5000	0127.8	033.3	283.0	006.0551	0313.3	080.3	50.04
178.0	007.5000	0126.4	033.2	283.0	006.0549	0313.3	080.9	49.85
179.0	007.5000	0123.1	032.8	283.2	006.0454	0313.4	081.6	49.63
180.0	007.5000	0118.7	032.3	283.4	006.0306	0313.4	082.2	49.40
181.0	007.5000	0114.4	031.7	283.7	006.0141	0313.4	082.9	49.18

WCNPNew vs. WCLQ  
Liberty And Freedom Inc.

FMCommander Single Allocation Study - 05-26-2011 - FCC NGDC 30 Sec  
WCNPNew's Overlaps (In= 0.67 km, Out= 0.31 km)

WCNPNew CH 208 B DA  
Lat= 43 25 40.3, Lng= 89 39 06.5  
6.5 kW 321.3 M HAAT, 610.2 M COR  
Prot.= 60 dBu, Intef.= 40 dBu

WCLQ CH 208 C1 DA BLED20040225ABB  
Lat= 44 55 11.0, Lng= 89 40 45.0  
90.0 kW 185 M HAAT, 569 M COR  
Prot.= 60 dBu, Intef.= 40 dBu



05-26-2011

Terrain Data: FCC NGDC 30 Sec

FMOver Analysis

WCNPNew

WCLQ BLED20040225ABB

Channel = 208B

Max ERP = 6.5 kW

RCAMSL = 610.2 M

N. Lat. 43 25 40.3

W. Lng. 89 39 06.5

Protected

60 dBu

Channel = 208C1

Max ERP = 90 kW

RCAMSL = 569 M

N. Lat. 44 55 11.0

W. Lng. 89 40 45.0

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
299.0	006.0241	0330.4	047.4	195.5	023.3088	0208.4	148.1	36.20	
300.0	006.0655	0328.8	047.4	195.4	023.2358	0208.5	147.3	36.32	
301.0	006.1083	0326.2	047.3	195.3	023.1047	0208.6	146.6	36.44	
302.0	006.1512	0322.9	047.1	195.1	022.9499	0208.8	145.8	36.55	
303.0	006.1943	0319.5	047.0	195.0	022.7875	0209.0	145.1	36.65	
304.0	006.2375	0317.0	046.9	194.8	022.6397	0209.1	144.4	36.76	
305.0	006.2809	0316.0	046.9	194.7	022.5236	0209.3	143.6	36.89	
306.0	006.3244	0315.9	046.9	194.6	022.4222	0209.4	142.8	37.02	
307.0	006.3681	0315.8	047.0	194.5	022.3150	0209.4	142.0	37.14	
308.0	006.4119	0315.3	047.0	194.4	022.1892	0209.5	141.3	37.26	
309.0	006.4559	0314.2	047.0	194.3	022.0441	0209.7	140.5	37.38	
310.0	006.5000	0313.1	047.0	194.1	021.8909	0209.8	139.8	37.49	
311.0	006.5000	0312.3	046.9	193.9	021.7172	0209.9	139.1	37.59	
312.0	006.5000	0312.1	046.9	193.8	021.5515	0210.0	138.3	37.70	
313.0	006.5000	0312.4	046.9	193.6	021.3901	0210.0	137.6	37.81	
314.0	006.5000	0313.1	047.0	193.5	021.2319	0210.1	136.9	37.92	
315.0	006.5000	0314.0	047.0	193.3	021.0716	0210.2	136.2	38.03	
316.0	006.5000	0314.8	047.1	193.1	020.9015	0210.3	135.4	38.13	
317.0	006.5000	0315.2	047.1	192.9	020.7171	0210.3	134.7	38.23	
318.0	006.5000	0315.4	047.1	192.7	020.5203	0210.4	134.1	38.32	
319.0	006.5000	0315.4	047.1	192.5	020.3140	0210.5	133.4	38.41	
320.0	006.5000	0315.5	047.1	192.3	020.1045	0210.7	132.7	38.50	
321.0	006.5000	0315.6	047.1	192.1	019.8904	0210.8	132.1	38.58	
322.0	006.5000	0315.8	047.2	191.9	019.6707	0210.9	131.4	38.66	
323.0	006.5000	0316.1	047.2	191.6	019.4470	0211.0	130.8	38.73	
324.0	006.5000	0316.9	047.2	191.4	019.2284	0211.2	130.2	38.81	
325.0	006.5000	0318.4	047.3	191.2	019.0181	0211.3	129.5	38.90	
326.0	006.5000	0320.5	047.5	191.0	018.8117	0211.4	128.8	38.99	
327.0	006.5000	0322.5	047.6	190.7	018.5969	0211.5	128.1	39.07	
328.0	006.5000	0323.6	047.7	190.5	018.3612	0211.6	127.5	39.14	
329.0	006.5000	0323.8	047.7	190.2	018.1020	0211.7	127.0	39.19	
330.0	006.5000	0323.4	047.6	189.9	017.8538	0211.9	126.4	39.24	
331.0	006.5000	0323.0	047.6	189.6	017.6726	0212.0	125.9	39.29	
332.0	006.5000	0323.1	047.6	189.3	017.4946	0212.1	125.4	39.35	
333.0	006.5000	0324.1	047.7	189.0	017.3214	0212.2	124.9	39.42	
334.0	006.5000	0325.8	047.8	188.7	017.1531	0212.4	124.3	39.50	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
335.0	006.5000	0328.2	047.9	188.5	016.9870	0212.5	123.7	39.58
336.0	006.5000	0330.5	048.1	188.2	016.8158	0212.5	123.1	39.65
337.0	006.5000	0332.0	048.2	187.9	016.6338	0212.5	122.6	39.71
338.0	006.5000	0332.4	048.2	187.5	016.4393	0212.4	122.2	39.74
339.0	006.5000	0332.2	048.2	187.2	016.2362	0212.3	121.8	39.76
340.0	006.5000	0331.8	048.2	186.8	016.0306	0212.1	121.4	39.78
341.0	006.5000	0331.7	048.2	186.4	015.8263	0212.0	121.0	39.80
342.0	006.5000	0332.0	048.2	186.1	015.6223	0211.9	120.7	39.81
343.0	006.5000	0332.5	048.2	185.7	015.4185	0211.7	120.3	39.82
344.0	006.5000	0333.1	048.3	185.4	015.2137	0211.4	120.0	39.83
345.0	006.5000	0333.8	048.3	185.0	015.0082	0211.1	119.6	39.83
346.0	006.5000	0334.5	048.4	184.6	014.8006	0210.8	119.3	39.83
347.0	006.5000	0334.6	048.4	184.2	014.5895	0210.4	119.0	39.82
348.0	006.5000	0334.2	048.3	183.8	014.3750	0209.9	118.8	39.78
349.0	006.5000	0333.4	048.3	183.4	014.1591	0209.4	118.7	39.74
350.0	006.5000	0332.8	048.2	183.0	013.9445	0209.1	118.5	39.70
351.0	006.5000	0332.5	048.2	182.6	013.7314	0208.8	118.3	39.66
352.0	006.5000	0332.6	048.2	182.2	013.5202	0208.4	118.2	39.62
353.0	006.5000	0333.3	048.3	181.8	013.3106	0208.0	118.0	39.58
354.0	006.5000	0334.0	048.3	181.4	013.1012	0207.6	117.8	39.53
355.0	006.5000	0334.7	048.4	181.0	012.8920	0207.1	117.7	39.48
356.0	006.5000	0335.4	048.4	180.6	012.6833	0206.6	117.6	39.42
357.0	006.5000	0335.9	048.4	180.2	012.4751	0206.1	117.5	39.36
358.0	006.5000	0336.0	048.4	179.8	012.4826	0205.6	117.4	39.36
359.0	006.5000	0335.8	048.4	179.3	012.6473	0205.2	117.4	39.40
000.0	006.5000	0335.6	048.4	178.9	012.8130	0204.7	117.4	39.44
001.0	006.5000	0334.8	048.4	178.5	012.9793	0204.4	117.5	39.48
002.0	006.5000	0333.4	048.3	178.1	013.1454	0204.6	117.6	39.51
003.0	006.5000	0332.3	048.2	177.7	013.3116	0204.9	117.8	39.54
004.0	006.5000	0332.3	048.2	177.3	013.4793	0205.1	117.9	39.59
005.0	006.5000	0333.1	048.3	176.9	013.6491	0205.4	117.9	39.63
006.0	006.5000	0334.0	048.3	176.5	013.8197	0205.6	118.0	39.68
007.0	006.5000	0335.5	048.4	176.1	013.9924	0205.8	118.1	39.72
008.0	006.5000	0337.5	048.5	175.6	014.1678	0205.9	118.1	39.77
009.0	006.5000	0339.8	048.7	175.2	014.3449	0205.9	118.2	39.82
010.0	006.5000	0341.5	048.8	174.8	014.5217	0205.9	118.3	39.85
011.0	006.5000	0342.4	048.9	174.4	014.6958	0205.8	118.4	39.86
012.0	006.5000	0342.3	048.9	174.0	014.8659	0205.7	118.7	39.86
013.0	006.5000	0341.7	048.8	173.6	015.0327	0205.6	119.0	39.84
014.0	006.5000	0340.7	048.7	173.2	015.1967	0205.5	119.4	39.81
015.0	006.5000	0339.7	048.7	172.9	015.3591	0205.2	119.7	39.77
016.0	006.5000	0338.8	048.6	172.5	015.5200	0204.7	120.1	39.73
017.0	006.5000	0337.7	048.6	172.1	015.6782	0204.2	120.5	39.68
018.0	006.5000	0336.4	048.5	171.8	015.8327	0203.6	121.0	39.62
019.0	006.5000	0335.0	048.4	171.5	015.9844	0203.0	121.4	39.55
020.0	006.5000	0333.6	048.3	171.1	016.1341	0202.5	121.9	39.49
021.0	006.5000	0332.5	048.2	170.8	016.2824	0201.9	122.4	39.42
022.0	006.5000	0331.6	048.2	170.5	016.4301	0201.4	122.8	39.35
023.0	006.5000	0330.6	048.1	170.1	016.5747	0201.0	123.3	39.28
024.0	006.5000	0329.3	048.0	169.8	016.7070	0200.7	123.9	39.20
025.0	006.5000	0327.7	047.9	169.5	016.8275	0200.5	124.4	39.11

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
026.0	006.5000	0325.9	047.8	169.3	016.9440	0200.3	125.0	39.02
027.0	006.5000	0324.0	047.7	169.0	017.0561	0200.2	125.6	38.93
028.0	006.5000	0321.9	047.5	168.7	017.1644	0200.1	126.2	38.83
029.0	006.5000	0319.8	047.4	168.5	017.2692	0200.0	126.9	38.73
030.0	006.5000	0318.0	047.3	168.2	017.3740	0199.9	127.5	38.63
031.0	006.5000	0316.4	047.2	168.0	017.4764	0199.8	128.1	38.53
032.0	006.5000	0314.9	047.1	167.7	017.5769	0199.7	128.8	38.43
033.0	006.5000	0313.6	047.0	167.5	017.6762	0199.5	129.4	38.33
034.0	006.5000	0312.4	046.9	167.3	017.7738	0199.3	130.1	38.22
035.0	006.5000	0311.5	046.9	167.1	017.8706	0199.1	130.7	38.11
036.0	006.5000	0310.8	046.8	166.8	017.9662	0198.8	131.3	38.01
037.0	006.5000	0310.5	046.8	166.6	018.0629	0198.5	132.0	37.90
038.0	006.5000	0310.1	046.8	166.4	018.1557	0198.2	132.6	37.79
039.0	006.5000	0309.9	046.8	166.2	018.2474	0197.8	133.3	37.67
040.0	006.5000	0309.3	046.7	166.0	018.3330	0197.4	133.9	37.55
041.0	006.5000	0308.4	046.7	165.8	018.4126	0196.9	134.6	37.43
042.0	006.5000	0307.5	046.6	165.6	018.4888	0196.5	135.3	37.30
043.0	006.5000	0306.1	046.5	165.5	018.5576	0196.1	136.1	37.16
044.0	006.5000	0304.5	046.5	165.3	018.6216	0195.8	136.8	37.03
045.0	006.5000	0302.6	046.3	165.2	018.6791	0195.4	137.6	36.89
046.0	006.5000	0300.7	046.2	165.1	018.7335	0195.1	138.3	36.75
047.0	006.5000	0298.7	046.1	164.9	018.7833	0194.8	139.1	36.61
048.0	006.5000	0296.4	045.9	164.8	018.8285	0194.5	139.9	36.46
049.0	006.5000	0293.6	045.8	164.8	018.8642	0194.3	140.7	36.31
050.0	006.5000	0290.0	045.5	164.7	018.8884	0194.2	141.5	36.16
051.0	006.5000	0285.8	045.3	164.7	018.9040	0194.1	142.3	36.01
052.0	006.5000	0281.4	045.0	164.6	018.9131	0194.1	143.2	35.85
053.0	006.5000	0277.0	044.7	164.6	018.9204	0194.0	144.0	35.70
054.0	006.5000	0273.1	044.5	164.6	018.9284	0194.0	144.8	35.55
055.0	006.5000	0269.5	044.2	164.6	018.9379	0193.9	145.6	35.40
056.0	006.5000	0265.4	044.0	164.6	018.9395	0193.9	146.4	35.26
057.0	006.5000	0260.8	043.7	164.6	018.9324	0194.0	147.2	35.11
058.0	006.5000	0256.1	043.4	164.6	018.9228	0194.0	148.1	34.97

05-26-2011

Terrain Data: FCC NGDC 30 Sec

FMOver Analysis

WCLQ BLED20040225ABB

WCNPNew

Channel = 208C1

Max ERP = 90 kW

RCAMSL = 569 M

N. Lat. 44 55 11.0

W. Lng. 89 40 45.0

Protected

60 dBu

Channel = 208B

Max ERP = 6.5 kW

RCAMSL = 610.2 M

N. Lat. 43 25 40.3

W. Lng. 89 39 06.5

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
119.0	005.1667	0192.3	037.0	011.4	006.5000	0342.5	151.0	32.93	
120.0	005.1840	0192.5	037.0	011.3	006.5000	0342.5	150.3	33.06	
121.0	005.2926	0193.3	037.3	011.3	006.5000	0342.5	149.6	33.19	
122.0	005.4022	0194.2	037.5	011.3	006.5000	0342.5	148.9	33.32	
123.0	005.5131	0195.1	037.7	011.3	006.5000	0342.5	148.2	33.46	
124.0	005.6250	0195.8	038.0	011.3	006.5000	0342.5	147.5	33.59	
125.0	005.7381	0196.4	038.2	011.3	006.5000	0342.5	146.8	33.73	
126.0	005.8522	0196.8	038.4	011.2	006.5000	0342.5	146.2	33.86	
127.0	005.9676	0196.8	038.5	011.2	006.5000	0342.5	145.5	33.99	
128.0	006.0840	0196.8	038.7	011.1	006.5000	0342.4	144.8	34.12	
129.0	006.2016	0197.3	038.9	011.1	006.5000	0342.4	144.1	34.26	
130.0	006.3202	0198.3	039.1	011.0	006.5000	0342.4	143.4	34.40	
131.0	006.5125	0199.4	039.4	011.0	006.5000	0342.4	142.6	34.56	
132.0	006.7076	0200.2	039.8	011.0	006.5000	0342.4	141.9	34.71	
133.0	006.9056	0200.7	040.0	010.9	006.5000	0342.4	141.2	34.86	
134.0	007.1065	0200.4	040.2	010.8	006.5000	0342.3	140.4	35.01	
135.0	007.3102	0199.6	040.4	010.7	006.5000	0342.3	139.8	35.15	
136.0	007.5169	0198.6	040.6	010.6	006.5000	0342.2	139.1	35.30	
137.0	007.7264	0197.8	040.7	010.5	006.5000	0342.1	138.4	35.44	
138.0	007.9388	0197.2	040.9	010.4	006.5000	0342.0	137.8	35.58	
139.0	008.1541	0196.9	041.1	010.3	006.5000	0341.9	137.1	35.73	
140.0	008.3723	0196.5	041.3	010.1	006.5000	0341.7	136.4	35.88	
141.0	008.8116	0196.2	041.7	010.1	006.5000	0341.6	135.6	36.06	
142.0	009.2621	0195.8	042.1	010.0	006.5000	0341.5	134.8	36.23	
143.0	009.7239	0195.4	042.5	009.9	006.5000	0341.4	134.0	36.41	
144.0	010.1970	0194.9	042.8	009.8	006.5000	0341.2	133.2	36.58	
145.0	010.6812	0194.3	043.2	009.7	006.5000	0341.1	132.4	36.76	
146.0	011.1767	0193.7	043.5	009.6	006.5000	0340.8	131.6	36.93	
147.0	011.6834	0193.2	043.8	009.4	006.5000	0340.6	130.9	37.09	
148.0	012.2014	0192.8	044.2	009.3	006.5000	0340.3	130.1	37.26	
149.0	012.7306	0192.1	044.5	009.1	006.5000	0340.0	129.4	37.42	
150.0	013.2710	0191.2	044.8	008.9	006.5000	0339.6	128.7	37.58	
151.0	013.9641	0190.4	045.1	008.7	006.5000	0339.2	127.9	37.74	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
152.0	014.6749	0189.9	045.5	008.6	006.5000	0338.8	127.1	37.91
153.0	015.4033	0189.3	045.9	008.4	006.5000	0338.4	126.3	38.08
154.0	016.1493	0189.0	046.3	008.2	006.5000	0337.9	125.5	38.24
155.0	016.9130	0188.5	046.7	008.0	006.5000	0337.5	124.8	38.40
156.0	017.6943	0187.7	047.0	007.7	006.5000	0337.0	124.1	38.54
157.0	018.4933	0186.8	047.3	007.5	006.5000	0336.4	123.4	38.69
158.0	019.3099	0186.4	047.7	007.2	006.5000	0335.9	122.6	38.83
159.0	020.1441	0186.9	048.1	007.0	006.5000	0335.5	121.9	38.99
160.0	020.9960	0187.7	048.5	006.7	006.5000	0335.0	121.1	39.16
161.0	020.5378	0188.5	048.4	006.4	006.5000	0334.5	120.8	39.19
162.0	020.0846	0189.2	048.2	006.0	006.5000	0334.0	120.6	39.23
163.0	019.6364	0190.5	048.2	005.6	006.5000	0333.6	120.4	39.27
164.0	019.1933	0192.5	048.1	005.2	006.5000	0333.3	120.1	39.32
165.0	018.7553	0195.0	048.1	004.9	006.5000	0333.0	119.8	39.38
166.0	018.3223	0197.4	048.1	004.5	006.5000	0332.7	119.5	39.43
167.0	017.8944	0199.0	048.0	004.1	006.5000	0332.4	119.4	39.46
168.0	017.4716	0199.8	047.9	003.7	006.5000	0332.0	119.3	39.47
169.0	017.0537	0200.2	047.7	003.3	006.5000	0332.0	119.2	39.48
170.0	016.6410	0200.9	047.5	002.9	006.5000	0332.4	119.2	39.50
171.0	016.1875	0202.3	047.4	002.5	006.5000	0332.9	119.2	39.53
172.0	015.7402	0204.0	047.3	002.1	006.5000	0333.3	119.1	39.56
173.0	015.2992	0205.3	047.1	001.7	006.5000	0333.8	119.1	39.57
174.0	014.8645	0205.7	046.9	001.3	006.5000	0334.4	119.2	39.57
175.0	014.4360	0205.9	046.7	000.9	006.5000	0335.0	119.4	39.56
176.0	014.0138	0205.8	046.4	000.5	006.5000	0335.4	119.6	39.53
177.0	013.5979	0205.3	046.1	000.1	006.5000	0335.5	119.8	39.48
178.0	013.1882	0204.7	045.8	359.7	006.5000	0335.6	120.1	39.41
179.0	012.7848	0204.8	045.5	359.3	006.5000	0335.7	120.3	39.36
180.0	012.3877	0205.9	045.3	359.0	006.5000	0335.8	120.5	39.32
181.0	012.8936	0207.1	045.8	358.6	006.5000	0335.9	120.1	39.42
182.0	013.4096	0208.2	046.2	358.2	006.5000	0335.9	119.7	39.51
183.0	013.9358	0209.1	046.6	357.8	006.5000	0336.0	119.4	39.59
184.0	014.4721	0210.2	047.0	357.4	006.5000	0336.0	119.1	39.67
185.0	015.0185	0211.1	047.4	357.0	006.5000	0335.9	118.8	39.74
186.0	015.5750	0211.9	047.8	356.6	006.5000	0335.8	118.5	39.80
187.0	016.1417	0212.2	048.2	356.1	006.5000	0335.5	118.3	39.83
188.0	016.7185	0212.5	048.5	355.7	006.5000	0335.2	118.2	39.86
189.0	017.3054	0212.2	048.8	355.3	006.5000	0334.9	118.1	39.87
190.0	017.9024	0211.8	049.1	354.9	006.5000	0334.6	118.0	39.87
191.0	018.8376	0211.4	049.5	354.4	006.5000	0334.3	117.8	39.90
192.0	019.7965	0210.8	049.9	353.9	006.5000	0334.0	117.7	39.92
193.0	020.7792	0210.3	050.3	353.5	006.5000	0333.7	117.6	39.92
194.0	021.7858	0209.8	050.7	353.0	006.5000	0333.3	117.6	39.92
195.0	022.8161	0209.0	051.0	352.6	006.5000	0332.9	117.6	39.91
196.0	023.8702	0207.7	051.3	352.1	006.5000	0332.7	117.6	39.88
197.0	024.9482	0206.2	051.6	351.7	006.5000	0332.6	117.8	39.84
198.0	026.0500	0204.6	051.9	351.2	006.5000	0332.5	117.9	39.80
199.0	027.1755	0203.1	052.1	350.8	006.5000	0332.5	118.1	39.76
200.0	028.3249	0201.5	052.3	350.3	006.5000	0332.7	118.4	39.71
201.0	029.8080	0199.6	052.6	349.9	006.5000	0332.8	118.6	39.67
202.0	031.3290	0197.6	052.9	349.4	006.5000	0333.1	118.8	39.62

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
203.0	032.8878	0196.0	053.2	349.0	006.5000	0333.4	119.1	39.57
204.0	034.4845	0194.7	053.5	348.5	006.5000	0333.8	119.3	39.52
205.0	036.1190	0193.1	053.8	348.1	006.5000	0334.1	119.7	39.46
206.0	037.7914	0190.7	054.0	347.7	006.5000	0334.4	120.1	39.37
207.0	039.5016	0188.5	054.2	347.3	006.5000	0334.5	120.5	39.27
208.0	041.2496	0187.0	054.5	346.9	006.5000	0334.6	120.9	39.18
209.0	043.0355	0186.1	054.8	346.5	006.5000	0334.6	121.3	39.08
210.0	044.8592	0185.2	055.1	346.0	006.5000	0334.5	121.8	38.97
211.0	047.2149	0184.1	055.4	345.6	006.5000	0334.3	122.2	38.87
212.0	049.6309	0182.7	055.8	345.2	006.5000	0334.0	122.7	38.75
213.0	052.1072	0181.5	056.1	344.8	006.5000	0333.6	123.2	38.62
214.0	054.6437	0180.8	056.5	344.3	006.5000	0333.3	123.7	38.49
215.0	057.2406	0180.8	056.9	343.9	006.5000	0333.0	124.2	38.37
216.0	059.8977	0181.1	057.3	343.5	006.5000	0332.7	124.7	38.24
217.0	062.6151	0181.6	057.8	343.0	006.5000	0332.5	125.2	38.11
218.0	065.3927	0181.9	058.2	342.6	006.5000	0332.3	125.8	37.97
219.0	068.2307	0181.7	058.5	342.2	006.5000	0332.1	126.5	37.82
220.0	071.1289	0181.3	058.9	341.9	006.5000	0331.9	127.2	37.66
221.0	072.9000	0180.8	059.1	341.6	006.5000	0331.8	127.9	37.48
222.0	074.6929	0180.3	059.2	341.3	006.5000	0331.8	128.8	37.29
223.0	076.5076	0179.5	059.4	341.0	006.5000	0331.7	129.6	37.10
224.0	078.3440	0178.8	059.5	340.7	006.5000	0331.7	130.4	36.91
225.0	080.2022	0178.4	059.7	340.5	006.5000	0331.7	131.3	36.71
226.0	082.0823	0178.4	059.9	340.2	006.5000	0331.7	132.2	36.52
227.0	083.9840	0178.7	060.2	339.9	006.5000	0331.8	133.0	36.33
228.0	085.9076	0178.9	060.4	339.7	006.5000	0331.9	133.9	36.14
229.0	087.8530	0178.9	060.6	339.5	006.5000	0332.0	134.8	35.94
230.0	089.8201	0178.8	060.8	339.2	006.5000	0332.1	135.8	35.74
231.0	089.5147	0178.9	060.8	339.1	006.5000	0332.1	136.8	35.52
232.0	089.2097	0179.1	060.8	339.0	006.5000	0332.2	137.8	35.30
233.0	088.9053	0179.4	060.8	338.9	006.5000	0332.2	138.8	35.09
234.0	088.6015	0179.5	060.7	338.8	006.5000	0332.3	139.8	34.87
235.0	088.2981	0179.2	060.7	338.7	006.5000	0332.3	140.9	34.65
236.0	087.9953	0178.4	060.6	338.6	006.5000	0332.3	141.9	34.44
237.0	087.6930	0177.5	060.4	338.6	006.5000	0332.3	143.0	34.22
238.0	087.3912	0176.3	060.3	338.6	006.5000	0332.3	144.1	34.01

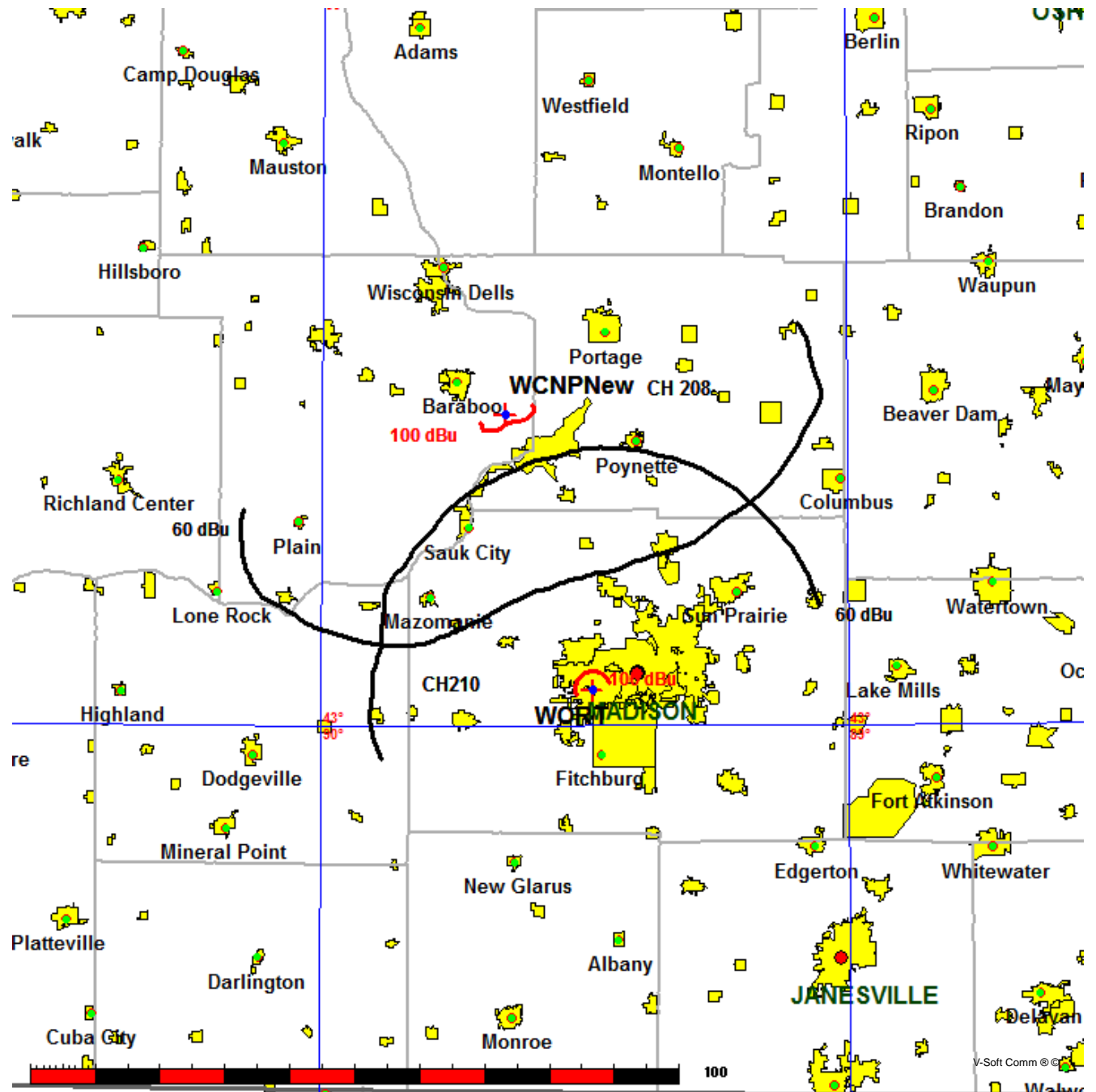


WCNPNew vs. WORT  
Liberty And Freedom Inc.

FMCommander Single Allocation Study - 05-26-2011 - FCC NGDC 30 Sec  
WCNPNew's Overlaps (In= 14.13 km, Out= 6.44 km)

WCNPNew CH 208 B DA  
Lat= 43 25 40.3, Lng= 89 39 06.5  
6.5 kW 321.3 M HAAT, 610.2 M COR  
Prot.= 60 dBu, Intef.= 100 dBu

WORT CH 210 B1 BLED19990208KB  
Lat= 43 03 03.0, Lng= 89 29 13.0  
2.0 kW 286 M HAAT, 582 M COR  
Prot.= 60 dBu, Intef.= 100 dBu



05-26-2011

Terrain Data: FCC NGDC 30 Sec

FMOver Analysis

WCNPNew

WORT BLED19990208KB

Channel = 208B

Max ERP = 6.5 kW

RCAMSL = 610.2 M

N. Lat. 43 25 40.3

W. Lng. 89 39 06.5

Protected

60 dBu

Channel = 210B1

Max ERP = 2 kW

RCAMSL = 582 M

N. Lat. 43 03 03.0

W. Lng. 89 29 13.0

Interfering

100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
102.0	003.2111	0348.6	043.0	040.8	002.0000	0315.8	043.7	58.94	
103.0	003.0665	0349.9	042.7	040.9	002.0000	0315.7	042.8	59.28	
104.0	002.9285	0351.1	042.4	041.0	002.0000	0315.7	042.0	59.63	
105.0	002.7967	0351.5	042.0	041.1	002.0000	0315.7	041.2	59.99	
106.0	002.6708	0351.0	041.6	041.0	002.0000	0315.7	040.4	60.36	
107.0	002.5506	0350.3	041.2	040.9	002.0000	0315.8	039.6	60.73	
108.0	002.4358	0349.3	040.8	040.7	002.0000	0315.9	038.7	61.11	
109.0	002.3262	0348.2	040.4	040.6	002.0000	0316.0	037.9	61.49	
110.0	002.2215	0346.2	039.9	040.3	002.0000	0316.3	037.1	61.88	
111.0	002.1215	0343.2	039.4	039.9	002.0000	0316.6	036.3	62.27	
112.0	002.0260	0339.4	038.8	039.4	002.0000	0316.9	035.4	62.67	
113.0	001.9349	0336.3	038.3	038.9	002.0000	0317.2	034.6	63.06	
114.0	001.8478	0334.3	037.8	038.4	002.0000	0317.4	033.9	63.44	
115.0	001.7646	0333.2	037.4	038.0	002.0000	0317.6	033.1	63.80	
116.0	001.6852	0333.2	037.0	037.6	002.0000	0317.8	032.4	64.16	
117.0	001.6093	0334.3	036.7	037.3	002.0000	0317.9	031.7	64.50	
118.0	001.5369	0336.1	036.5	037.0	002.0000	0318.0	031.1	64.86	
119.0	001.4677	0337.9	036.2	036.7	002.0000	0318.2	030.4	65.23	
120.0	001.4017	0339.2	035.9	036.3	002.0000	0318.3	029.7	65.61	
121.0	001.3386	0340.9	035.7	035.9	002.0000	0318.4	029.1	65.99	
122.0	001.2783	0343.4	035.4	035.6	002.0000	0318.4	028.5	66.38	
123.0	001.2208	0346.1	035.2	035.2	002.0000	0318.4	027.8	66.77	
124.0	001.1659	0348.1	035.0	034.7	002.0000	0318.1	027.2	67.16	
125.0	001.1134	0348.9	034.6	034.0	002.0000	0317.6	026.6	67.54	
126.0	001.0633	0348.4	034.3	033.2	002.0000	0316.7	026.0	67.92	
127.0	001.0154	0347.1	033.8	032.2	002.0000	0315.9	025.5	68.29	
128.0	000.9697	0345.9	033.4	031.1	002.0000	0315.3	024.9	68.65	
129.0	000.9261	0345.1	033.0	030.0	002.0000	0314.9	024.4	69.01	
130.0	000.8844	0344.7	032.6	028.9	002.0000	0315.1	023.9	69.38	
131.0	000.8446	0344.3	032.3	027.7	002.0000	0316.0	023.4	69.75	
132.0	000.8066	0344.5	031.9	026.5	002.0000	0316.6	023.0	70.10	
133.0	000.7703	0345.1	031.6	025.3	002.0000	0316.8	022.5	70.44	
134.0	000.7356	0346.1	031.3	024.2	002.0000	0316.2	022.1	70.75	
135.0	000.7025	0347.4	031.0	023.0	002.0000	0314.6	021.7	71.02	
136.0	000.6709	0348.6	030.7	021.7	002.0000	0313.3	021.3	71.28	
137.0	000.6407	0349.6	030.4	020.4	002.0000	0312.4	021.0	71.53	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
138.0	000.6119	0350.6	030.1	019.0	002.0000	0311.0	020.6	71.76
139.0	000.5843	0352.2	029.9	017.7	002.0000	0309.4	020.3	71.97
140.0	000.5580	0354.6	029.7	016.3	002.0000	0307.4	020.0	72.17
141.0	000.5535	0356.7	029.7	015.6	002.0000	0306.8	019.6	72.51
142.0	000.5489	0357.3	029.6	014.6	002.0000	0306.8	019.2	72.83
143.0	000.5444	0356.1	029.5	013.3	002.0000	0307.5	018.8	73.12
144.0	000.5399	0353.7	029.4	011.9	002.0000	0308.1	018.5	73.37
145.0	000.5354	0350.8	029.2	010.4	002.0000	0308.3	018.3	73.58
146.0	000.5309	0347.5	029.0	008.9	002.0000	0306.6	018.1	73.70
147.0	000.5265	0343.1	028.7	007.1	002.0000	0304.5	017.9	73.77
148.0	000.5221	0337.6	028.4	005.3	002.0000	0302.7	017.9	73.79
149.0	000.5176	0332.5	028.2	003.5	002.0000	0303.3	017.8	73.85
150.0	000.5132	0329.2	028.0	001.8	002.0000	0303.2	017.7	73.93
151.0	000.5074	0328.0	027.8	000.3	002.0000	0301.6	017.6	74.01
152.0	000.5016	0328.4	027.8	358.8	002.0000	0299.8	017.4	74.11
153.0	000.4959	0329.3	027.7	357.3	002.0000	0297.8	017.2	74.20
154.0	000.4901	0329.9	027.7	355.7	002.0000	0294.5	017.1	74.23
155.0	000.4844	0329.7	027.6	354.1	002.0000	0291.1	017.0	74.21
156.0	000.4788	0328.8	027.5	352.4	002.0000	0287.1	016.9	74.12
157.0	000.4731	0327.6	027.4	350.8	002.0000	0284.7	016.9	74.06
158.0	000.4676	0327.1	027.3	349.1	002.0000	0285.1	016.9	74.07
159.0	000.4620	0328.0	027.2	347.5	002.0000	0286.0	016.9	74.14
160.0	000.4565	0329.3	027.2	345.9	002.0000	0286.3	016.8	74.18
161.0	000.4544	0329.9	027.2	344.3	002.0000	0285.5	016.8	74.18
162.0	000.4523	0330.4	027.2	342.7	002.0000	0281.9	016.8	74.08
163.0	000.4503	0331.6	027.2	341.1	002.0000	0277.5	016.8	73.97
164.0	000.4482	0333.6	027.3	339.5	002.0000	0276.5	016.8	73.96
165.0	000.4462	0335.9	027.3	337.8	002.0000	0277.3	016.7	74.00
166.0	000.4441	0337.7	027.4	336.2	002.0000	0276.5	016.8	73.95
167.0	000.4421	0339.2	027.4	334.6	002.0000	0275.7	016.8	73.88
168.0	000.4401	0339.4	027.4	333.0	002.0000	0276.6	017.0	73.79
169.0	000.4380	0339.2	027.3	331.5	002.0000	0278.0	017.1	73.69
170.0	000.4360	0338.6	027.3	330.1	002.0000	0279.0	017.3	73.55
171.0	000.4462	0338.8	027.4	328.4	002.0000	0278.4	017.4	73.51
172.0	000.4565	0339.8	027.6	326.7	002.0000	0276.7	017.4	73.44
173.0	000.4669	0340.7	027.8	325.0	002.0000	0275.4	017.4	73.37
174.0	000.4774	0341.8	028.0	323.3	002.0000	0274.1	017.5	73.27
175.0	000.4880	0343.0	028.2	321.6	002.0000	0273.6	017.6	73.18
176.0	000.4987	0344.4	028.4	319.9	002.0000	0273.0	017.7	73.07
177.0	000.5096	0345.1	028.6	318.3	002.0000	0270.9	017.9	72.87
178.0	000.5206	0345.9	028.8	316.7	002.0000	0268.0	018.0	72.63
179.0	000.5317	0347.0	029.0	315.2	002.0000	0264.3	018.2	72.35
180.0	000.5429	0347.2	029.1	313.7	002.0000	0262.3	018.5	72.09
181.0	000.5722	0346.8	029.5	311.8	002.0000	0263.0	018.6	71.99
182.0	000.6023	0346.4	029.8	310.0	002.0000	0264.4	018.8	71.89
183.0	000.6331	0345.4	030.1	308.3	002.0000	0266.0	019.0	71.75
184.0	000.6648	0345.1	030.5	306.6	002.0000	0266.0	019.3	71.55
185.0	000.6972	0344.9	030.8	304.9	002.0000	0264.1	019.6	71.26
186.0	000.7303	0346.8	031.3	303.1	002.0000	0262.8	019.8	71.00
187.0	000.7643	0348.7	031.7	301.2	002.0000	0266.1	020.1	70.86
188.0	000.7990	0349.6	032.1	299.6	002.0000	0271.3	020.5	70.73

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
189.0	000.8345	0348.9	032.4	298.3	002.0000	0274.6	020.9	70.50
190.0	000.8707	0348.3	032.7	297.1	002.0000	0276.6	021.4	70.21
191.0	000.9185	0347.8	033.1	295.6	002.0000	0276.8	021.8	69.87
192.0	000.9617	0348.0	033.5	294.4	002.0000	0274.6	022.3	69.43
193.0	001.0071	0349.6	033.9	293.0	002.0000	0269.9	022.8	68.91
194.0	001.0545	0351.3	034.3	291.7	002.0000	0264.9	023.3	68.36
195.0	001.1042	0353.7	034.8	290.4	002.0000	0260.8	023.8	67.83
196.0	001.1563	0356.4	035.3	289.1	002.0000	0257.9	024.4	67.32
197.0	001.2108	0359.7	035.8	287.9	002.0000	0255.3	025.0	66.80
198.0	001.2678	0362.7	036.3	286.8	002.0000	0253.2	025.7	66.29
199.0	001.3276	0365.3	036.8	285.8	002.0000	0251.6	026.3	65.79
200.0	001.3901	0367.0	037.2	284.9	002.0000	0250.3	027.0	65.29
201.0	001.4557	0368.0	037.6	284.2	002.0000	0249.3	027.7	64.80
202.0	001.5243	0368.5	038.0	283.6	002.0000	0248.2	028.4	64.32
203.0	001.5961	0368.1	038.4	283.2	002.0000	0247.1	029.1	63.84
204.0	001.6713	0367.0	038.7	282.8	002.0000	0246.2	029.8	63.39
205.0	001.7501	0365.6	039.0	282.5	002.0000	0245.6	030.5	62.95
206.0	001.8326	0364.2	039.3	282.3	002.0000	0245.1	031.3	62.54
207.0	001.9189	0362.9	039.6	282.1	002.0000	0244.8	032.0	62.14
208.0	002.0094	0361.5	039.9	281.9	002.0000	0244.6	032.7	61.75
209.0	002.1041	0359.7	040.2	281.8	002.0000	0244.4	033.5	61.38
210.0	002.2032	0357.6	040.4	281.7	002.0000	0244.4	034.2	61.01
211.0	002.3071	0355.6	040.7	281.7	002.0000	0244.3	035.0	60.64
212.0	002.4158	0353.8	041.0	281.7	002.0000	0244.3	035.8	60.27
213.0	002.5296	0351.9	041.2	281.7	002.0000	0244.3	036.5	59.90
214.0	002.6489	0350.0	041.5	281.7	002.0000	0244.3	037.3	59.53
215.0	002.7737	0348.0	041.8	281.8	002.0000	0244.4	038.1	59.17
216.0	002.9044	0346.1	042.1	281.8	002.0000	0244.5	038.8	58.82
217.0	003.0413	0344.2	042.3	281.9	002.0000	0244.6	039.6	58.46
218.0	003.1846	0342.4	042.6	282.0	002.0000	0244.7	040.4	58.11
219.0	003.3347	0340.7	042.9	282.1	002.0000	0244.9	041.2	57.76
220.0	003.4919	0339.3	043.2	282.3	002.0000	0245.1	042.0	57.40
221.0	003.6564	0338.1	043.5	282.4	002.0000	0245.3	042.8	57.05

05-26-2011

Terrain Data: FCC NGDC 30 Sec

FMOver Analysis

WORT BLED19990208KB

WCNPNew

Channel = 210B1

Max ERP = 2 kW

RCAMSL = 582 M

N. Lat. 43 03 03.0

W. Lng. 89 29 13.0

Protected

60 dBu

Channel = 208B

Max ERP = 6.5 kW

RCAMSL = 610.2 M

N. Lat. 43 25 40.3

W. Lng. 89 39 06.5

Interfering

100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
282.0	002.0000	0244.7	033.3	208.8	002.0835	0360.1	039.9	62.05	
283.0	002.0000	0246.7	033.5	209.2	002.1253	0359.3	039.4	62.34	
284.0	002.0000	0248.9	033.6	209.7	002.1683	0358.3	038.8	62.64	
285.0	002.0000	0250.4	033.7	210.0	002.2049	0357.6	038.3	62.93	
286.0	002.0000	0252.0	033.8	210.4	002.2428	0356.8	037.8	63.23	
287.0	002.0000	0253.6	033.9	210.8	002.2809	0356.1	037.2	63.54	
288.0	002.0000	0255.5	034.0	211.1	002.3224	0355.3	036.7	63.85	
289.0	002.0000	0257.7	034.1	211.6	002.3667	0354.6	036.1	64.17	
290.0	002.0000	0259.9	034.3	212.0	002.4118	0353.8	035.5	64.49	
291.0	002.0000	0262.6	034.4	212.4	002.4635	0353.0	035.0	64.82	
292.0	002.0000	0266.0	034.7	213.0	002.5241	0352.0	034.4	65.16	
293.0	002.0000	0269.9	034.9	213.5	002.5919	0350.9	033.9	65.51	
294.0	002.0000	0273.6	035.1	214.1	002.6577	0349.9	033.3	65.86	
295.0	002.0000	0276.0	035.2	214.5	002.7108	0349.0	032.7	66.20	
296.0	002.0000	0277.0	035.3	214.8	002.7440	0348.5	032.1	66.53	
297.0	002.0000	0276.7	035.3	214.9	002.7602	0348.2	031.5	66.86	
298.0	002.0000	0275.3	035.2	214.9	002.7598	0348.3	030.9	67.18	
299.0	002.0000	0273.0	035.1	214.8	002.7442	0348.5	030.3	67.51	
300.0	002.0000	0270.1	034.9	214.6	002.7177	0348.9	029.7	67.83	
301.0	002.0000	0266.9	034.7	214.3	002.6805	0349.5	029.1	68.14	
302.0	002.0000	0264.1	034.5	214.0	002.6469	0350.0	028.4	68.47	
303.0	002.0000	0262.9	034.5	213.9	002.6319	0350.3	027.8	68.83	
304.0	002.0000	0263.1	034.5	213.9	002.6368	0350.2	027.2	69.22	
305.0	002.0000	0264.2	034.5	214.0	002.6525	0350.0	026.6	69.63	
306.0	002.0000	0265.4	034.6	214.2	002.6681	0349.7	026.0	70.05	
307.0	002.0000	0266.2	034.7	214.2	002.6742	0349.6	025.4	70.48	
308.0	002.0000	0266.2	034.7	214.1	002.6641	0349.8	024.8	70.88	
309.0	002.0000	0265.4	034.6	213.9	002.6365	0350.2	024.2	71.28	
310.0	002.0000	0264.4	034.6	213.6	002.6032	0350.7	023.6	71.67	
311.0	002.0000	0263.6	034.5	213.3	002.5671	0351.3	023.0	72.06	
312.0	002.0000	0262.9	034.5	213.0	002.5281	0352.0	022.4	72.45	
313.0	002.0000	0262.3	034.4	212.6	002.4885	0352.6	021.9	72.84	
314.0	002.0000	0262.5	034.4	212.4	002.4573	0353.1	021.3	73.25	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
315.0	002.0000	0263.9	034.5	212.2	002.4434	0353.3	020.7	73.70
316.0	002.0000	0266.3	034.7	212.3	002.4442	0353.3	020.0	74.19
317.0	002.0000	0268.6	034.8	212.2	002.4386	0353.4	019.4	74.68
318.0	002.0000	0270.4	034.9	212.0	002.4187	0353.7	018.8	75.14
319.0	002.0000	0271.9	035.0	211.7	002.3883	0354.2	018.2	75.59
320.0	002.0000	0273.1	035.1	211.4	002.3463	0354.9	017.6	76.03
321.0	002.0000	0273.6	035.1	210.8	002.2846	0356.0	017.0	76.42
322.0	002.0000	0273.6	035.1	210.0	002.2067	0357.5	016.4	76.78
323.0	002.0000	0273.8	035.1	209.2	002.1275	0359.2	015.9	77.13
324.0	002.0000	0274.6	035.2	208.5	002.0518	0360.7	015.3	77.50
325.0	002.0000	0275.4	035.2	207.6	001.9703	0362.1	014.7	77.95
326.0	002.0000	0276.1	035.2	206.6	001.8805	0363.4	014.2	78.47
327.0	002.0000	0276.9	035.3	205.4	001.7859	0364.9	013.6	78.99
328.0	002.0000	0277.9	035.4	204.2	001.6889	0366.7	013.1	79.53
329.0	002.0000	0278.8	035.4	202.8	001.5841	0368.2	012.5	80.02
330.0	002.0000	0279.0	035.4	201.1	001.4639	0368.1	012.0	80.39
331.0	002.0000	0278.4	035.4	199.1	001.3319	0365.4	011.6	80.57
332.0	002.0000	0277.6	035.3	196.7	001.1968	0358.8	011.2	80.58
333.0	002.0000	0276.6	035.3	194.2	001.0646	0351.7	010.8	80.48
334.0	002.0000	0275.9	035.2	191.5	000.9400	0347.7	010.4	80.41
335.0	002.0000	0275.8	035.2	188.7	000.8239	0349.3	010.1	80.43
336.0	002.0000	0276.4	035.3	185.8	000.7231	0346.3	009.7	80.35
337.0	002.0000	0277.1	035.3	182.6	000.6221	0345.7	009.4	80.20
338.0	002.0000	0277.3	035.3	179.2	000.5338	0347.3	009.2	79.98
339.0	002.0000	0276.8	035.3	175.5	000.4929	0343.5	009.0	79.84
340.0	002.0000	0276.5	035.3	171.6	000.4523	0339.4	008.8	79.60
341.0	002.0000	0277.4	035.3	167.7	000.4407	0339.4	008.7	79.73
342.0	002.0000	0279.7	035.5	163.7	000.4489	0332.9	008.5	79.99
343.0	002.0000	0282.7	035.6	159.4	000.4596	0328.6	008.4	80.28
344.0	002.0000	0285.0	035.8	155.1	000.4839	0329.7	008.3	80.63
345.0	002.0000	0286.3	035.8	150.8	000.5087	0328.1	008.3	80.73
346.0	002.0000	0286.3	035.8	146.7	000.5277	0344.5	008.5	80.90
347.0	002.0000	0286.1	035.8	142.9	000.5448	0356.3	008.8	80.87
348.0	002.0000	0285.8	035.8	139.3	000.5752	0353.0	009.1	80.58
349.0	002.0000	0285.2	035.8	136.1	000.6667	0348.8	009.4	80.57
350.0	002.0000	0284.5	035.7	133.2	000.7630	0345.3	009.8	80.47
351.0	002.0000	0284.9	035.8	130.3	000.8708	0344.6	010.2	80.44
352.0	002.0000	0286.0	035.8	127.5	000.9903	0346.4	010.5	80.45
353.0	002.0000	0288.6	036.0	124.7	001.1301	0348.8	010.9	80.54
354.0	002.0000	0290.9	036.1	122.1	001.2736	0343.7	011.3	80.33
355.0	002.0000	0293.2	036.2	119.7	001.4211	0338.9	011.7	80.03
356.0	002.0000	0295.1	036.3	117.6	001.5641	0335.4	012.2	79.67
357.0	002.0000	0297.3	036.4	115.7	001.7110	0333.1	012.7	79.30
358.0	002.0000	0298.8	036.5	114.0	001.8448	0334.2	013.2	78.93
359.0	002.0000	0300.1	036.6	112.6	001.9690	0337.4	013.7	78.56
000.0	002.0000	0301.3	036.7	111.4	002.0857	0341.8	014.3	78.21
001.0	002.0000	0302.6	036.7	110.3	002.1958	0345.5	014.9	77.84
002.0	002.0000	0303.2	036.8	109.4	002.2873	0347.6	015.5	77.49
003.0	002.0000	0303.4	036.8	108.7	002.3620	0348.6	016.1	77.15
004.0	002.0000	0303.1	036.8	108.1	002.4207	0349.2	016.7	76.75
005.0	002.0000	0302.8	036.7	107.7	002.4705	0349.7	017.3	76.34

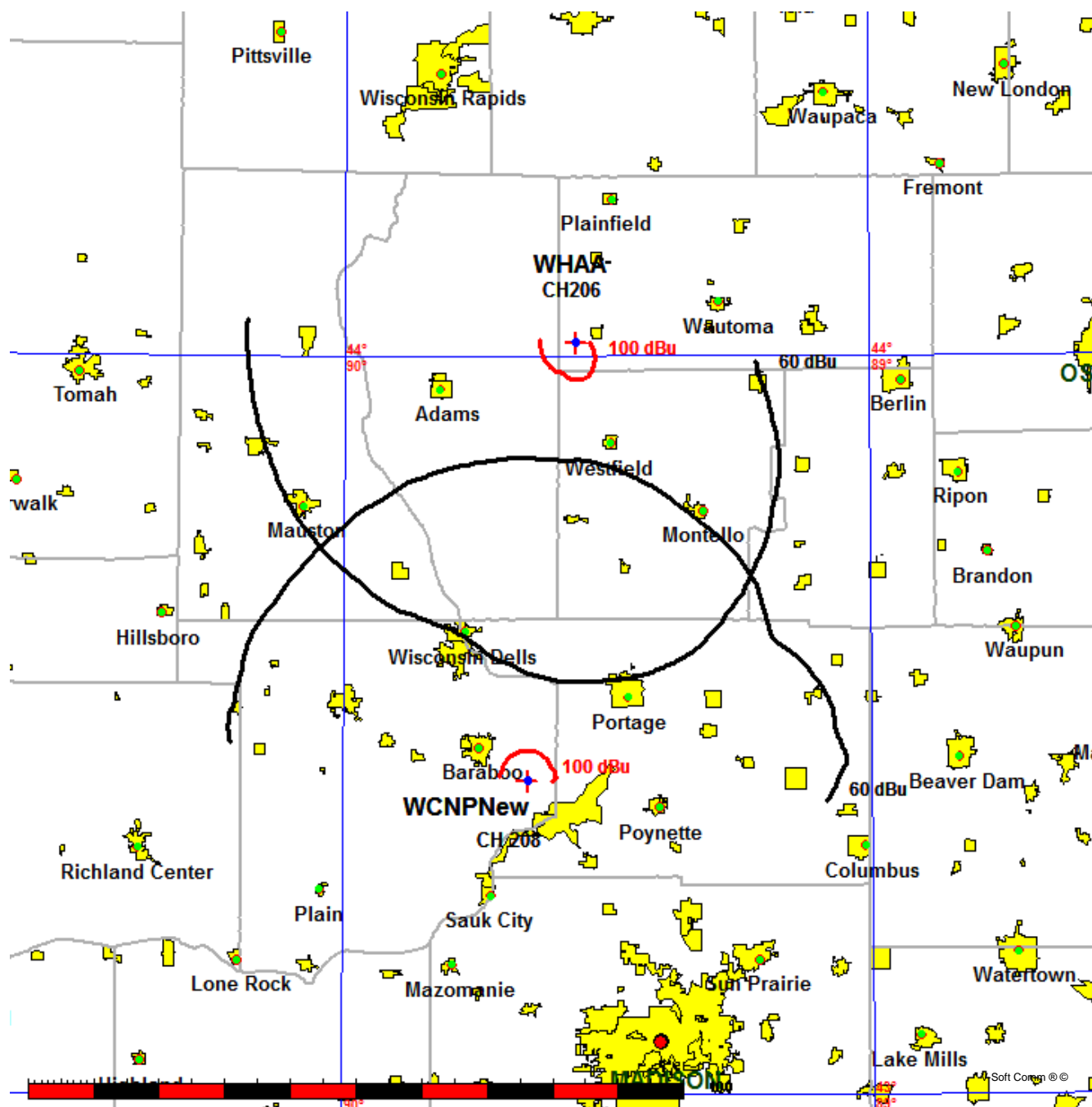
Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
006.0	002.0000	0303.0	036.8	107.2	002.5258	0350.2	018.0	75.93
007.0	002.0000	0304.3	036.8	106.6	002.5944	0350.6	018.6	75.56
008.0	002.0000	0305.6	036.9	106.1	002.6567	0351.0	019.2	75.17
009.0	002.0000	0306.7	037.0	105.7	002.7087	0351.2	019.8	74.76
010.0	002.0000	0307.9	037.0	105.3	002.7561	0351.4	020.5	74.34
011.0	002.0000	0308.4	037.0	105.1	002.7844	0351.5	021.1	73.88
012.0	002.0000	0308.1	037.0	105.0	002.7930	0351.5	021.7	73.40
013.0	002.0000	0307.7	037.0	105.0	002.7956	0351.5	022.4	72.92
014.0	002.0000	0307.2	037.0	105.0	002.7933	0351.5	023.0	72.43
015.0	002.0000	0306.6	036.9	105.1	002.7859	0351.5	023.7	71.94
016.0	002.0000	0307.1	037.0	105.0	002.7924	0351.5	024.3	71.49
017.0	002.0000	0308.4	037.0	104.9	002.8088	0351.5	025.0	71.06
018.0	002.0000	0309.8	037.1	104.8	002.8232	0351.5	025.6	70.63
019.0	002.0000	0311.0	037.2	104.7	002.8298	0351.5	026.3	70.20
020.0	002.0000	0312.1	037.2	104.7	002.8321	0351.5	026.9	69.77
021.0	002.0000	0312.9	037.3	104.8	002.8262	0351.5	027.6	69.34
022.0	002.0000	0313.5	037.3	104.9	002.8161	0351.5	028.2	68.92
023.0	002.0000	0314.7	037.4	104.9	002.8095	0351.5	028.9	68.51
024.0	002.0000	0316.0	037.5	104.9	002.8033	0351.5	029.5	68.11
025.0	002.0000	0316.7	037.5	105.1	002.7866	0351.5	030.2	67.72
026.0	002.0000	0316.7	037.5	105.3	002.7594	0351.4	030.8	67.32
027.0	002.0000	0316.4	037.5	105.5	002.7272	0351.3	031.5	66.93
028.0	002.0000	0315.7	037.4	105.8	002.6896	0351.1	032.1	66.55
029.0	002.0000	0315.0	037.4	106.2	002.6510	0350.9	032.7	66.17
030.0	002.0000	0314.9	037.4	106.4	002.6190	0350.7	033.3	65.81
031.0	002.0000	0315.3	037.4	106.7	002.5913	0350.6	034.0	65.45
032.0	002.0000	0315.8	037.4	106.9	002.5642	0350.4	034.6	65.09
033.0	002.0000	0316.5	037.5	107.1	002.5381	0350.2	035.3	64.74
034.0	002.0000	0317.5	037.5	107.3	002.5141	0350.1	035.9	64.39
035.0	002.0000	0318.3	037.6	107.6	002.4868	0349.8	036.5	64.04
036.0	002.0000	0318.4	037.6	107.9	002.4527	0349.5	037.2	63.68
037.0	002.0000	0318.1	037.6	108.2	002.4145	0349.1	037.8	63.32
038.0	002.0000	0317.6	037.5	108.5	002.3755	0348.7	038.4	62.96
039.0	002.0000	0317.1	037.5	108.9	002.3362	0348.3	039.0	62.60
040.0	002.0000	0316.5	037.5	109.3	002.2961	0347.8	039.6	62.24
041.0	002.0000	0315.7	037.4	109.7	002.2553	0347.0	040.2	61.88

WCNPNew vs. WHAA  
Liberty And Freedom Inc.

FMCommander Single Allocation Study - 05-26-2011 - FCC NGDC 30 Sec  
WCNPNew's Overlaps (In= 12.21 km, Out= 11.12 km)

WCNPNew CH 208 B DA  
Lat= 43 25 40.3, Lng= 89 39 06.5  
6.5 kW 321.3 M HAAT, 610.2 M COR  
Prot.= 60 dBu, Intef.= 100 dBu

WHAA CH 206 C2 DA BLED20100212AAK  
Lat= 44 01 13.0, Lng= 89 33 31.0  
28.5 kW 177 M HAAT, 487 M COR  
Prot.= 60 dBu, Intef.= 100 dBu





05-26-2011

Terrain Data: FCC NGDC 30 Sec

FMOver Analysis

WCNPNew

WHAA BLED20100212AAK

Channel = 208B

Max ERP = 6.5 kW

RCAMSL = 610.2 M

N. Lat. 43 25 40.3

W. Lng. 89 39 06.5

Protected

60 dBu

Channel = 206C2

Max ERP = 28.5 kW

RCAMSL = 487 M

N. Lat. 44 01 13.0

W. Lng. 89 33 31.0

Interfering

100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
306.0	006.3244	0315.9	046.9	230.0	028.5000	0170.8	059.3	58.80	
307.0	006.3681	0315.8	047.0	230.3	028.5000	0170.9	058.5	59.08	
308.0	006.4119	0315.3	047.0	230.5	028.5000	0171.0	057.7	59.37	
309.0	006.4559	0314.2	047.0	230.6	028.5000	0171.1	056.9	59.68	
310.0	006.5000	0313.1	047.0	230.8	028.5000	0171.1	056.1	59.98	
311.0	006.5000	0312.3	046.9	230.9	028.5000	0171.1	055.3	60.29	
312.0	006.5000	0312.1	046.9	231.0	028.5000	0171.2	054.5	60.60	
313.0	006.5000	0312.4	046.9	231.1	028.5000	0171.2	053.7	60.91	
314.0	006.5000	0313.1	047.0	231.3	028.5000	0171.2	052.9	61.22	
315.0	006.5000	0314.0	047.0	231.5	028.5000	0171.2	052.1	61.53	
316.0	006.5000	0314.8	047.1	231.6	028.5000	0171.2	051.3	61.84	
317.0	006.5000	0315.2	047.1	231.7	028.5000	0171.3	050.5	62.16	
318.0	006.5000	0315.4	047.1	231.8	028.5000	0171.3	049.6	62.48	
319.0	006.5000	0315.4	047.1	231.8	028.5000	0171.3	048.8	62.79	
320.0	006.5000	0315.5	047.1	231.9	028.5000	0171.3	048.0	63.11	
321.0	006.5000	0315.6	047.1	231.9	028.5000	0171.3	047.2	63.43	
322.0	006.5000	0315.8	047.2	231.9	028.5000	0171.3	046.4	63.76	
323.0	006.5000	0316.1	047.2	231.9	028.5000	0171.3	045.5	64.10	
324.0	006.5000	0316.9	047.2	232.0	028.5000	0171.3	044.7	64.45	
325.0	006.5000	0318.4	047.3	232.0	028.5000	0171.3	043.9	64.81	
326.0	006.5000	0320.5	047.5	232.2	028.5000	0171.3	043.0	65.17	
327.0	006.5000	0322.5	047.6	232.2	028.5000	0171.3	042.2	65.55	
328.0	006.5000	0323.6	047.7	232.2	028.5000	0171.3	041.4	65.92	
329.0	006.5000	0323.8	047.7	232.1	028.5000	0171.3	040.6	66.31	
330.0	006.5000	0323.4	047.6	231.9	028.5000	0171.3	039.7	66.69	
331.0	006.5000	0323.0	047.6	231.7	028.5000	0171.3	038.9	67.08	
332.0	006.5000	0323.1	047.6	231.5	028.5000	0171.2	038.1	67.47	
333.0	006.5000	0324.1	047.7	231.3	028.5000	0171.2	037.3	67.88	
334.0	006.5000	0325.8	047.8	231.2	028.5000	0171.2	036.4	68.30	
335.0	006.5000	0328.2	047.9	231.1	028.5000	0171.2	035.6	68.72	
336.0	006.5000	0330.5	048.1	231.0	028.5000	0171.2	034.7	69.15	
337.0	006.5000	0332.0	048.2	230.8	028.5000	0171.1	033.9	69.58	
338.0	006.5000	0332.4	048.2	230.4	028.5000	0171.0	033.1	70.00	
339.0	006.5000	0332.2	048.2	229.9	028.5000	0170.8	032.3	70.41	
340.0	006.5000	0331.8	048.2	229.4	028.5000	0170.4	031.5	70.81	
341.0	006.5000	0331.7	048.2	228.8	028.5000	0169.9	030.7	71.22	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
342.0	006.5000	0332.0	048.2	228.2	028.5000	0169.4	030.0	71.65
343.0	006.5000	0332.5	048.2	227.6	028.5000	0168.8	029.2	72.08
344.0	006.5000	0333.1	048.3	226.9	028.5000	0168.1	028.4	72.53
345.0	006.5000	0333.8	048.3	226.2	028.5000	0167.3	027.7	72.98
346.0	006.5000	0334.5	048.4	225.4	028.5000	0166.5	026.9	73.43
347.0	006.5000	0334.6	048.4	224.5	028.5000	0165.7	026.2	73.87
348.0	006.5000	0334.2	048.3	223.4	028.5000	0165.0	025.5	74.31
349.0	006.5000	0333.4	048.3	222.1	028.5000	0164.6	024.8	74.74
350.0	006.5000	0332.8	048.2	220.9	028.5000	0164.3	024.2	75.19
351.0	006.5000	0332.5	048.2	219.5	028.5000	0164.3	023.6	75.64
352.0	006.5000	0332.6	048.2	218.1	028.5000	0164.2	023.0	76.10
353.0	006.5000	0333.3	048.3	216.7	028.5000	0163.8	022.3	76.55
354.0	006.5000	0334.0	048.3	215.2	028.5000	0162.9	021.7	76.95
355.0	006.5000	0334.7	048.4	213.5	028.5000	0161.1	021.2	77.29
356.0	006.5000	0335.4	048.4	211.7	028.5000	0158.0	020.6	77.53
357.0	006.5000	0335.9	048.4	209.8	028.5000	0155.4	020.1	77.76
358.0	006.5000	0336.0	048.4	207.7	028.5000	0154.0	019.7	78.03
359.0	006.5000	0335.8	048.4	205.5	028.5000	0152.5	019.3	78.24
000.0	006.5000	0335.6	048.4	203.2	028.5000	0151.1	018.9	78.43
001.0	006.5000	0334.8	048.4	200.8	028.5000	0153.4	018.7	78.79
002.0	006.5000	0333.4	048.3	198.2	028.5000	0158.2	018.5	79.22
003.0	006.5000	0332.3	048.2	195.6	028.5000	0164.6	018.4	79.72
004.0	006.5000	0332.3	048.2	193.1	028.5000	0168.4	018.2	80.06
005.0	006.5000	0333.1	048.3	190.4	028.5000	0171.9	018.1	80.38
006.0	006.5000	0334.0	048.3	187.8	028.5000	0179.6	017.9	80.86
007.0	006.5000	0335.5	048.4	185.1	028.5000	0183.6	017.9	81.12
008.0	006.5000	0337.5	048.5	182.3	028.5000	0186.4	017.8	81.31
009.0	006.5000	0339.8	048.7	179.6	028.4384	0187.3	017.7	81.37
010.0	006.5000	0341.5	048.8	176.8	028.0474	0188.4	017.8	81.31
011.0	006.5000	0342.4	048.9	174.1	027.6698	0189.4	018.0	81.16
012.0	006.5000	0342.3	048.9	171.6	027.3134	0192.2	018.2	81.00
013.0	006.5000	0341.7	048.8	169.2	026.6585	0194.3	018.6	80.70
014.0	006.5000	0340.7	048.7	166.9	025.4769	0196.4	019.0	80.25
015.0	006.5000	0339.7	048.7	164.8	024.3877	0198.1	019.5	79.77
016.0	006.5000	0338.8	048.6	162.8	023.3832	0199.7	020.0	79.26
017.0	006.5000	0337.7	048.6	160.9	022.4695	0201.0	020.5	78.71
018.0	006.5000	0336.4	048.5	159.2	021.3826	0202.8	021.1	78.11
019.0	006.5000	0335.0	048.4	157.6	020.1197	0204.0	021.7	77.42
020.0	006.5000	0333.6	048.3	156.2	018.9809	0204.4	022.3	76.70
021.0	006.5000	0332.5	048.2	154.8	017.9441	0205.1	023.0	76.00
022.0	006.5000	0331.6	048.2	153.5	016.9905	0206.1	023.7	75.31
023.0	006.5000	0330.6	048.1	152.3	016.1396	0206.2	024.3	74.59
024.0	006.5000	0329.3	048.0	151.3	015.3992	0205.8	025.0	73.86
025.0	006.5000	0327.7	047.9	150.3	014.7628	0205.6	025.8	73.15
026.0	006.5000	0325.9	047.8	149.5	014.2423	0205.7	026.5	72.48
027.0	006.5000	0324.0	047.7	148.8	013.8124	0206.2	027.3	71.85
028.0	006.5000	0321.9	047.5	148.1	013.4354	0206.8	028.1	71.25
029.0	006.5000	0319.8	047.4	147.6	013.1029	0207.5	028.9	70.67
030.0	006.5000	0318.0	047.3	147.0	012.7849	0208.0	029.6	70.11
031.0	006.5000	0316.4	047.2	146.5	012.4968	0208.4	030.4	69.56
032.0	006.5000	0314.9	047.1	146.0	012.2315	0208.7	031.2	69.03

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
033.0	006.5000	0313.6	047.0	145.5	011.9854	0208.7	032.0	68.52
034.0	006.5000	0312.4	046.9	145.1	011.7574	0208.6	032.8	68.03
035.0	006.5000	0311.5	046.9	144.7	011.5422	0208.5	033.6	67.53
036.0	006.5000	0310.8	046.8	144.3	011.3408	0208.2	034.4	67.04
037.0	006.5000	0310.5	046.8	144.0	011.1392	0207.8	035.1	66.55
038.0	006.5000	0310.1	046.8	143.6	010.9661	0207.6	035.9	66.08
039.0	006.5000	0309.9	046.8	143.3	010.8037	0207.4	036.7	65.61
040.0	006.5000	0309.3	046.7	143.1	010.6765	0207.2	037.5	65.17
041.0	006.5000	0308.4	046.7	142.9	010.5808	0207.1	038.3	64.73
042.0	006.5000	0307.5	046.6	142.7	010.5030	0207.1	039.1	64.31
043.0	006.5000	0306.1	046.5	142.6	010.4590	0207.0	040.0	63.91
044.0	006.5000	0304.5	046.5	142.6	010.4350	0207.0	040.8	63.53
045.0	006.5000	0302.6	046.3	142.6	010.4372	0207.0	041.6	63.15
046.0	006.5000	0300.7	046.2	142.6	010.4488	0207.0	042.4	62.79
047.0	006.5000	0298.7	046.1	142.7	010.4761	0207.0	043.2	62.44
048.0	006.5000	0296.4	045.9	142.8	010.5186	0207.1	044.0	62.11
049.0	006.5000	0293.6	045.8	142.9	010.5948	0207.1	044.8	61.80
050.0	006.5000	0290.0	045.5	143.1	010.7109	0207.2	045.6	61.51
051.0	006.5000	0285.8	045.3	143.4	010.8546	0207.4	046.5	61.24
052.0	006.5000	0281.4	045.0	143.7	011.0171	0207.6	047.3	60.99
053.0	006.5000	0277.0	044.7	144.0	011.1785	0207.9	048.0	60.75
054.0	006.5000	0273.1	044.5	144.3	011.3313	0208.2	048.8	60.51
055.0	006.5000	0269.5	044.2	144.6	011.4724	0208.4	049.6	60.27
056.0	006.5000	0265.4	044.0	144.9	011.6372	0208.5	050.4	60.04
057.0	006.5000	0260.8	043.7	145.3	011.8290	0208.7	051.1	59.82
058.0	006.5000	0256.1	043.4	145.6	012.0235	0208.7	051.9	59.59
059.0	006.5000	0252.7	043.1	145.9	012.1752	0208.7	052.6	59.35
060.0	006.5000	0251.9	043.1	146.0	012.2342	0208.7	053.4	59.07
061.0	006.5000	0253.5	043.2	145.9	012.2066	0208.7	054.1	58.77
062.0	006.5000	0258.0	043.5	145.7	012.0842	0208.7	054.9	58.42
063.0	006.5000	0264.5	043.9	145.4	011.9028	0208.7	055.7	58.04
064.0	006.5000	0271.9	044.4	145.0	011.7033	0208.6	056.5	57.64
065.0	006.5000	0279.3	044.9	144.7	011.5180	0208.4	057.4	57.23

05-26-2011

Terrain Data: FCC NGDC 30 Sec

FMOver Analysis

WHAA BLED20100212AAK

WCNPNew

Channel = 206C2

Max ERP = 28.5 kW

RCAMSL = 487 M

N. Lat. 44 01 13.0

W. Lng. 89 33 31.0

Protected

60 dBu

Channel = 208B

Max ERP = 6.5 kW

RCAMSL = 610.2 M

N. Lat. 43 25 40.3

W. Lng. 89 39 06.5

Interfering

100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
127.0	005.1019	0207.6	038.1	041.3	006.5000	0308.2	057.3	58.41	
128.0	005.3286	0207.1	038.4	041.6	006.5000	0307.9	056.6	58.67	
129.0	005.5603	0206.8	038.7	042.0	006.5000	0307.5	055.9	58.91	
130.0	005.7969	0206.6	039.1	042.3	006.5000	0307.1	055.3	59.15	
131.0	006.0990	0206.5	039.5	042.8	006.5000	0306.4	054.6	59.39	
132.0	006.4087	0207.0	039.9	043.3	006.5000	0305.7	053.9	59.64	
133.0	006.7260	0207.6	040.3	043.8	006.5000	0304.9	053.2	59.88	
134.0	007.0511	0208.3	040.8	044.3	006.5000	0304.1	052.5	60.13	
135.0	007.3838	0208.6	041.2	044.7	006.5000	0303.2	051.8	60.39	
136.0	007.7242	0208.9	041.6	045.1	006.5000	0302.3	051.1	60.65	
137.0	008.0722	0209.2	042.0	045.6	006.5000	0301.5	050.3	60.91	
138.0	008.4280	0209.5	042.3	046.0	006.5000	0300.7	049.6	61.18	
139.0	008.7914	0209.5	042.7	046.4	006.5000	0300.1	048.8	61.46	
140.0	009.1624	0208.7	043.0	046.6	006.5000	0299.4	048.1	61.74	
141.0	009.6437	0207.7	043.3	047.0	006.5000	0298.6	047.3	62.02	
142.0	010.1372	0207.0	043.7	047.4	006.5000	0297.8	046.5	62.31	
143.0	010.6431	0207.2	044.1	047.9	006.5000	0296.8	045.7	62.61	
144.0	011.1613	0207.9	044.6	048.3	006.5000	0295.6	044.9	62.91	
145.0	011.6918	0208.6	045.0	048.8	006.5000	0294.2	044.1	63.21	
146.0	012.2347	0208.7	045.4	049.2	006.5000	0292.9	043.3	63.52	
147.0	012.7898	0208.0	045.8	049.6	006.5000	0291.8	042.4	63.85	
148.0	013.3573	0207.0	046.1	049.8	006.5000	0290.8	041.6	64.18	
149.0	013.9371	0206.0	046.4	050.1	006.5000	0289.8	040.8	64.53	
150.0	014.5292	0205.6	046.7	050.3	006.5000	0288.6	039.9	64.87	
151.0	015.2085	0205.7	047.1	050.7	006.5000	0286.9	039.0	65.22	
152.0	015.9033	0206.1	047.5	051.1	006.5000	0285.3	038.2	65.58	
153.0	016.6136	0206.3	047.9	051.5	006.5000	0283.7	037.3	65.94	
154.0	017.3394	0205.8	048.3	051.8	006.5000	0282.4	036.4	66.33	
155.0	018.0807	0205.0	048.6	052.0	006.5000	0281.5	035.5	66.72	
156.0	018.8376	0204.5	048.9	052.2	006.5000	0280.5	034.6	67.13	
157.0	019.6100	0204.2	049.3	052.4	006.5000	0279.5	033.7	67.55	
158.0	020.3979	0203.8	049.6	052.6	006.5000	0278.9	032.7	67.98	
159.0	021.2013	0203.0	049.9	052.6	006.5000	0278.6	031.8	68.42	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
160.0	022.0203	0202.0	050.1	052.6	006.5000	0278.6	030.9	68.91
161.0	022.5039	0201.0	050.2	052.3	006.5000	0279.9	030.1	69.43
162.0	022.9928	0200.1	050.4	052.0	006.5000	0281.4	029.2	69.99
163.0	023.4869	0199.6	050.5	051.7	006.5000	0282.9	028.3	70.57
164.0	023.9862	0198.9	050.6	051.3	006.5000	0284.8	027.4	71.18
165.0	024.4909	0197.9	050.7	050.7	006.5000	0287.1	026.6	71.81
166.0	025.0008	0197.0	050.9	050.1	006.5000	0289.5	025.7	72.46
167.0	025.5159	0196.3	051.0	049.5	006.5000	0292.1	024.9	73.13
168.0	026.0363	0195.6	051.1	048.7	006.5000	0294.4	024.1	73.81
169.0	026.5619	0194.6	051.2	047.9	006.5000	0296.8	023.2	74.48
170.0	027.0928	0193.3	051.3	046.8	006.5000	0299.0	022.5	75.14
171.0	027.2319	0192.5	051.2	045.5	006.5000	0301.7	021.7	75.77
172.0	027.3714	0191.8	051.2	044.0	006.5000	0304.5	021.0	76.40
173.0	027.5112	0190.3	051.2	042.3	006.5000	0307.1	020.4	76.98
174.0	027.6514	0189.5	051.1	040.6	006.5000	0308.9	019.7	77.54
175.0	027.7920	0189.0	051.1	038.7	006.5000	0310.0	019.1	78.08
176.0	027.9329	0188.7	051.2	036.8	006.5000	0310.6	018.5	78.60
177.0	028.0741	0188.4	051.2	034.6	006.5000	0311.8	017.9	79.10
178.0	028.2157	0188.0	051.2	032.3	006.5000	0314.4	017.4	79.61
179.0	028.3577	0187.6	051.2	029.8	006.5000	0318.3	016.9	80.12
180.0	028.5000	0187.1	051.2	027.2	006.5000	0323.6	016.4	80.62
181.0	028.5000	0186.8	051.2	024.3	006.5000	0328.9	016.1	81.05
182.0	028.5000	0186.5	051.2	021.3	006.5000	0332.2	015.8	81.38
183.0	028.5000	0186.1	051.1	018.1	006.5000	0336.2	015.6	81.68
184.0	028.5000	0185.1	051.0	014.9	006.5000	0339.9	015.4	81.87
185.0	028.5000	0183.8	050.9	011.6	006.5000	0342.5	015.4	81.96
186.0	028.5000	0182.2	050.8	008.2	006.5000	0338.1	015.5	81.80
187.0	028.5000	0180.9	050.7	005.0	006.5000	0333.1	015.6	81.58
188.0	028.5000	0179.2	050.5	001.8	006.5000	0333.7	015.8	81.41
189.0	028.5000	0176.4	050.3	358.9	006.5000	0335.8	016.2	81.14
190.0	028.5000	0173.1	049.9	356.1	006.5000	0335.5	016.7	80.71
191.0	028.5000	0170.7	049.7	353.5	006.5000	0333.7	017.2	80.28
192.0	028.5000	0169.3	049.5	351.0	006.5000	0332.5	017.6	79.89
193.0	028.5000	0168.5	049.4	348.6	006.5000	0333.8	018.0	79.58
194.0	028.5000	0167.6	049.3	346.3	006.5000	0334.6	018.5	79.22
195.0	028.5000	0166.1	049.2	344.3	006.5000	0333.2	019.0	78.72
196.0	028.5000	0163.6	048.9	342.6	006.5000	0332.3	019.7	78.14
197.0	028.5000	0160.9	048.6	341.1	006.5000	0331.7	020.5	77.52
198.0	028.5000	0158.6	048.3	339.8	006.5000	0331.8	021.2	76.95
199.0	028.5000	0156.7	048.0	338.4	006.5000	0332.4	022.0	76.41
200.0	028.5000	0154.8	047.8	337.3	006.5000	0332.2	022.7	75.84
201.0	028.5000	0153.1	047.6	336.2	006.5000	0330.8	023.4	75.26
202.0	028.5000	0151.8	047.4	335.1	006.5000	0328.4	024.1	74.68
203.0	028.5000	0151.2	047.3	333.9	006.5000	0325.7	024.8	74.12
204.0	028.5000	0151.2	047.3	332.7	006.5000	0323.7	025.4	73.62
205.0	028.5000	0151.9	047.4	331.5	006.5000	0323.0	026.0	73.19
206.0	028.5000	0152.9	047.5	330.2	006.5000	0323.2	026.6	72.80
207.0	028.5000	0153.6	047.6	329.1	006.5000	0323.8	027.3	72.39
208.0	028.5000	0154.1	047.7	328.1	006.5000	0323.7	028.0	71.95
209.0	028.5000	0154.7	047.8	327.1	006.5000	0322.7	028.7	71.49
210.0	028.5000	0155.5	047.9	326.2	006.5000	0320.9	029.4	71.03

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
211.0	028.5000	0156.8	048.0	325.2	006.5000	0318.9	030.0	70.57
212.0	028.5000	0158.5	048.3	324.3	006.5000	0317.2	030.7	70.14
213.0	028.5000	0160.3	048.5	323.3	006.5000	0316.3	031.4	69.74
214.0	028.5000	0161.7	048.7	322.5	006.5000	0315.9	032.2	69.35
215.0	028.5000	0162.7	048.8	321.9	006.5000	0315.8	032.9	68.97
216.0	028.5000	0163.4	048.9	321.3	006.5000	0315.7	033.7	68.58
217.0	028.5000	0163.9	048.9	320.9	006.5000	0315.6	034.6	68.18
218.0	028.5000	0164.2	049.0	320.5	006.5000	0315.6	035.4	67.78
219.0	028.5000	0164.3	049.0	320.2	006.5000	0315.5	036.2	67.39
220.0	028.5000	0164.3	049.0	320.0	006.5000	0315.5	037.0	66.99
221.0	028.5000	0164.4	049.0	319.8	006.5000	0315.4	037.9	66.60
222.0	028.5000	0164.5	049.0	319.6	006.5000	0315.4	038.7	66.21
223.0	028.5000	0164.8	049.0	319.4	006.5000	0315.4	039.6	65.83
224.0	028.5000	0165.4	049.1	319.2	006.5000	0315.4	040.4	65.45
225.0	028.5000	0166.2	049.2	318.9	006.5000	0315.4	041.3	65.07
226.0	028.5000	0167.1	049.3	318.7	006.5000	0315.4	042.1	64.70
227.0	028.5000	0168.2	049.4	318.5	006.5000	0315.4	043.0	64.33
228.0	028.5000	0169.2	049.5	318.4	006.5000	0315.4	043.8	63.97
229.0	028.5000	0170.1	049.6	318.3	006.5000	0315.4	044.7	63.60
230.0	028.5000	0170.8	049.7	318.2	006.5000	0315.4	045.6	63.25
231.0	028.5000	0171.2	049.7	318.2	006.5000	0315.4	046.4	62.89
232.0	028.5000	0171.3	049.7	318.3	006.5000	0315.4	047.3	62.54
233.0	028.5000	0171.4	049.8	318.3	006.5000	0315.4	048.2	62.20
234.0	028.5000	0171.7	049.8	318.4	006.5000	0315.4	049.0	61.86
235.0	028.5000	0172.1	049.8	318.4	006.5000	0315.4	049.9	61.52
236.0	028.5000	0172.7	049.9	318.5	006.5000	0315.4	050.8	61.18
237.0	028.5000	0173.4	050.0	318.6	006.5000	0315.4	051.6	60.84
238.0	028.5000	0174.1	050.0	318.6	006.5000	0315.4	052.5	60.50
239.0	028.5000	0174.6	050.1	318.8	006.5000	0315.4	053.4	60.16
240.0	028.5000	0174.8	050.1	318.9	006.5000	0315.4	054.3	59.82
241.0	028.5000	0174.9	050.1	319.1	006.5000	0315.4	055.1	59.48
242.0	028.5000	0174.8	050.1	319.3	006.5000	0315.4	056.0	59.15
243.0	028.5000	0174.7	050.1	319.5	006.5000	0315.4	056.8	58.83
244.0	028.5000	0174.3	050.1	319.8	006.5000	0315.4	057.7	58.50
245.0	028.5000	0173.9	050.0	320.0	006.5000	0315.5	058.5	58.19
246.0	028.5000	0173.5	050.0	320.3	006.5000	0315.5	059.3	57.87