

Exhibit 18.1

Tabulation of Proposed NCE-FM Allocation

REFERENCE 43 57 17.0 N. 84 32 59.0 W.											
CH# 214C3 - 90.7 MHz, Pwr= 10 kW DA, HAAT= 129.6 M, COR= 382 M Average Protected F(50-50)= 36.13 km Standard Directional											
DISPLAY DATES DATA 01-16-12 SEARCH 01-19-12											
CH CITY	CALL	TYPE STATE	ANT ---	AZI ---	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
214A Harri son	WK KM	LIC _CX MI		289.3 109.1	21.1 BLED20110718AAF	44 01 02.0 84 47 56.0	0.100 30	27.3 366	8.2 The Country King, Incorpor	-35.8*	-79.8
213B East Lansing	WKAR-FM	LIC _C_ MI		175.4 355.5	139.7 BLED20110817ACF	42 42 07.0 84 24 48.0	87.000 269	100.9 536	69.2 Michigan State University	0.1	13.0
215C3 Rose Township 2/25/2010:	WM SD	CP DCX MI		38.8 219.2	68.4 BPED20091119AAF	44 25 58.0 84 00 33.0	15.000 21	45.3 335	28.4 Bible Baptist Church School	0.6	6.5
Accepted on channel 215B1 by Industry Canada in 1/11/2010 letter. Note: not short-spaced.											
215A Freeland	WTRK	LIC _CX MI		133.5 313.9	63.2 BLED20061113AFY	43 33 42.0 83 58 52.0	0.430 99	20.7 289	13.7 Educational Media Foundati	10.6	1.3
215A Alma	WOAC	LIC _CN MI		188.9 8.8	64.7 BLED19930402KA	43 22 46.0 84 40 25.0	0.100 20	8.0 250	5.6 Alma College	18.5	2.0
213C Gaylord	WPHN	LIC _CN MI		13.0 193.3	135.1 BLED19850419LP	45 08 17.0 84 09 44.0	100.000 305	104.1 579	71.6 Northern Christian Radi o,	2.9	20.4
215A Rose Township	WM SD	LIC _V_ MI		38.8 219.2	68.4 BLED20000808AAA	44 25 58.0 84 00 33.0	5.000 21	33.2 335	22.2 Bible Baptist Church School	12.8	12.8
214A Traverse City Recl assi fied to Class A 980316	WNMC-FM	LIC _CN MI		315.8 135.0	128.4 BLED19971126KC	44 46 36.0 85 41 02.0	0.600 164	62.5 395	20.2 Northwestern Michigan Coll	34.4	13.5
214B Sandusky	WNFR	LIC DCX MI		118.2 299.6	179.4 BLED20050303ACY	43 10 27.0 82 36 01.0	42.000 150	130.6 364	47.3 Ross Bible Church	13.9	36.6
211C2 Bay City	WUCX-FM	LIC _CN MI		122.6 303.2	82.4 BLED19891010KB	43 33 10.0 83 41 24.0	30.000 146	5.2 328	47.4 Central Michigan Universit	42.9	31.6
217A Bay City	WCHW-FM	LIC _HN MI		126.7 307.1	67.9 BLED19820112AC	43 35 19.0 83 52 28.0	0.110 38	0.7 219	6.3 School District, Bay City	34.1	58.4
215B1 Bel ding	WSLI	LIC DVX MI		212.9 32.4	114.6 BLED20110107AEQ	43 05 12.0 85 18 59.0	11.500 73	27.2 330	18.6 Smile Fm	50.2	40.2
216C1 Cadi llac	WOLW	LIC DEN MI		291.4 110.6	99.8 BLED19880502KC	44 16 33.0 85 42 49.0	50.000 213	6.0 560	52.3 Northern Christian Radi o,	64.1	44.3
217C3 East Tawas	WGJU	LIC DV_ MI		63.1 243.7	79.3 BLED20080724AAN	44 16 25.0 83 39 48.0	20.000 82	3.1 296	30.3 Baraga Broadcasting, Inc.	53.7	47.0

Terrain database is USGS 03 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= - Zone 2, 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.
 Reference station has protected zone issue: Canada

Light Blue Highlighted Text denotes the WK KM(FM) facility to be modified by this Form 340 proposal. This facility need not be protected.

Yellow Highlighted Text denotes §73.509 Contour Protection Studies toward select stations as included in **Exhibit(s) 18.2 to 18.6.**

Exhibit 18.2

Contour Protection Study Toward WKAR-FM - East Lansing, MI

The Country King, Incorporated

FMCommander Single Allocation Study - 01-19-2012 - USGS 03 SEC
WKKM.P's Overlaps (In= 0.15 km, Out= 12.96 km)

WKKM.P CH 214 C3 DA
Lat= 43 57 17.0, Lng= 84 32 59.0
10.0 kW 129.6 M HAAT, 382 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WKAR-FM CH 213 B BLED20110817ACF
Lat= 42 42 07.0, Lng= 84 24 48.0
87.0 kW 269.3 M HAAT, 535.6 M COR
Prot.= 60 dBu, Intef.= 54 dBu

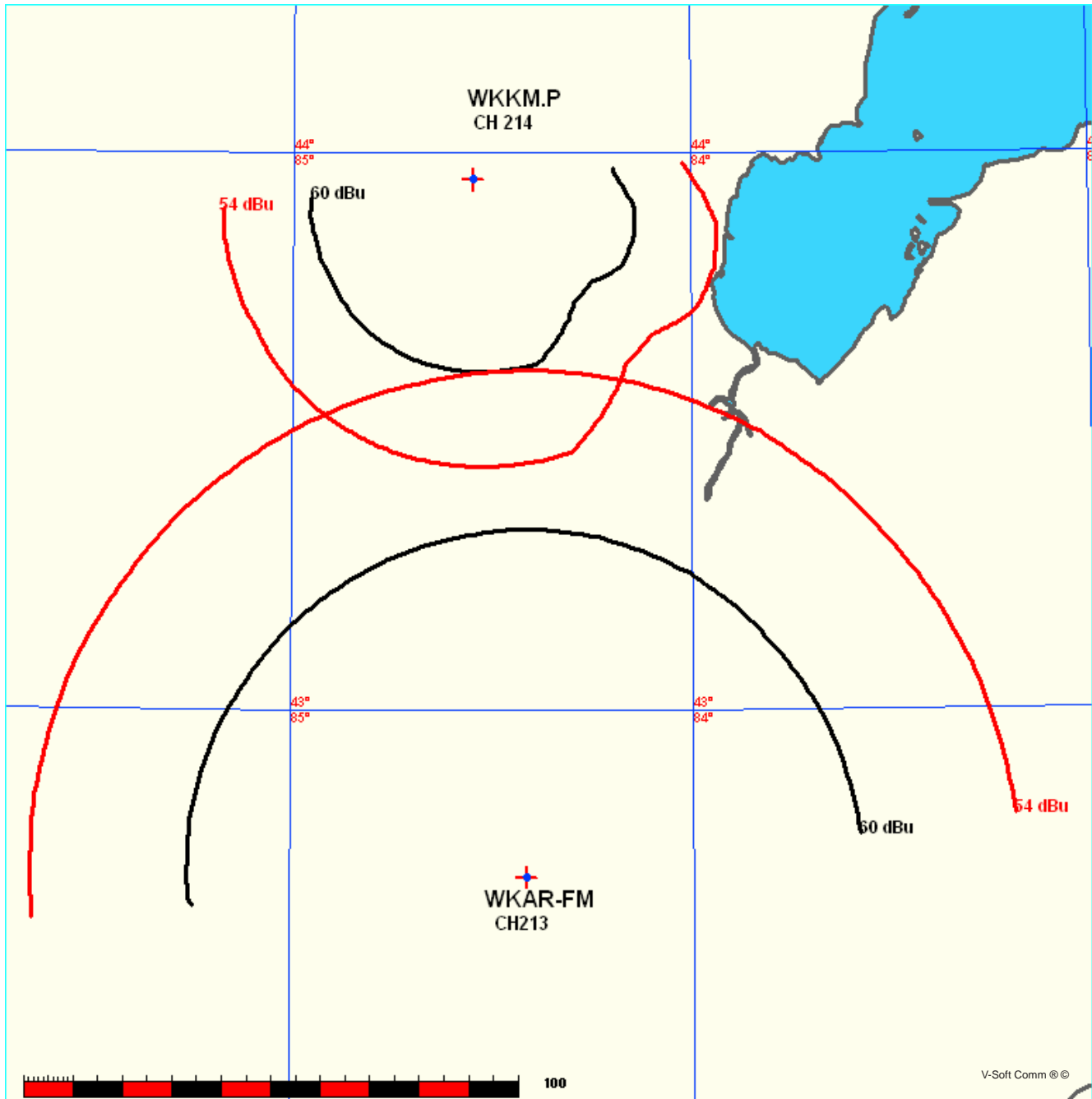


Exhibit 18.2

Contour Protection Study Toward WKAR-FM - East Lansing, MI

01-19-2012

Terrain Data: USGS 03 SEC

FMOver Analysis

WKMM.P

WKAR-FM BLED20110817ACF

Channel = 214C3

Max ERP = 10 kW

RCAMSL = 382 M

N. Lat. 43 57 17.0

W. Lng. 84 32 59.0

Protected

60 dBu

Channel = 213B

Max ERP = 87 kW

RCAMSL = 535.6 M

N. Lat. 42 42 07.0

W. Lng. 84 24 48.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
130.0	004.0738	0158.1	031.8	006.3	087.0000	0276.5	119.5	49.07	
131.0	004.0738	0158.3	031.9	006.2	087.0000	0276.4	119.1	49.17	
132.0	004.0738	0158.7	031.9	006.0	087.0000	0276.4	118.6	49.27	
133.0	004.0738	0159.1	031.9	005.9	087.0000	0276.5	118.1	49.38	
134.0	004.0738	0159.7	032.0	005.8	087.0000	0276.6	117.6	49.49	
135.0	004.0738	0160.1	032.1	005.6	087.0000	0276.8	117.2	49.60	
136.0	004.0738	0160.4	032.1	005.4	087.0000	0276.9	116.7	49.70	
137.0	004.0738	0160.7	032.1	005.3	087.0000	0277.1	116.3	49.81	
138.0	004.0738	0161.0	032.1	005.1	087.0000	0277.3	115.8	49.92	
139.0	004.0738	0161.5	032.2	004.9	087.0000	0277.4	115.4	50.02	
140.0	004.0738	0161.6	032.2	004.7	087.0000	0277.4	115.0	50.12	
141.0	004.2875	0161.5	032.6	004.7	087.0000	0277.4	114.3	50.28	
142.0	004.5067	0161.5	033.0	004.6	087.0000	0277.4	113.6	50.44	
143.0	004.7313	0161.5	033.4	004.5	087.0000	0277.5	112.9	50.61	
144.0	004.9614	0161.4	033.8	004.4	087.0000	0277.5	112.3	50.77	
145.0	005.1969	0161.3	034.2	004.3	087.0000	0277.4	111.6	50.94	
146.0	005.4379	0161.1	034.5	004.2	087.0000	0277.5	111.0	51.11	
147.0	005.6844	0160.9	034.9	004.1	087.0000	0277.5	110.3	51.28	
148.0	005.9363	0160.7	035.2	003.9	087.0000	0277.5	109.7	51.44	
149.0	006.1937	0160.4	035.5	003.7	087.0000	0277.5	109.1	51.61	
150.0	006.4565	0160.2	035.8	003.6	087.0000	0277.5	108.4	51.78	
151.0	006.7761	0160.0	036.2	003.4	087.0000	0277.6	107.8	51.96	
152.0	007.1035	0159.8	036.6	003.2	087.0000	0277.6	107.1	52.15	
153.0	007.4385	0159.6	036.9	003.0	087.0000	0277.7	106.5	52.33	
154.0	007.7813	0159.4	037.3	002.8	087.0000	0277.9	105.9	52.51	
155.0	008.1318	0159.3	037.6	002.6	087.0000	0278.1	105.3	52.70	
156.0	008.4900	0159.1	038.0	002.4	087.0000	0278.3	104.7	52.88	
157.0	008.8559	0158.9	038.3	002.1	087.0000	0278.3	104.1	53.06	
158.0	009.2295	0158.9	038.6	001.9	087.0000	0278.2	103.5	53.23	
159.0	009.6109	0158.7	038.9	001.6	087.0000	0277.9	102.9	53.39	
160.0	010.0000	0158.4	039.2	001.3	087.0000	0277.9	102.4	53.55	
161.0	010.0000	0158.0	039.2	000.9	087.0000	0278.2	102.2	53.62	
162.0	010.0000	0157.6	039.1	000.6	087.0000	0278.6	102.0	53.68	
163.0	010.0000	0157.3	039.1	000.2	087.0000	0278.5	101.9	53.73	
164.0	010.0000	0157.0	039.1	359.8	087.0000	0278.1	101.7	53.77	
165.0	010.0000	0156.7	039.0	359.4	087.0000	0277.7	101.5	53.80	

MUNN-REESE, INC.

Broadcast Engineering Consultants

COLDWATER, MI 49036

Exhibit 18.2

Contour Protection Study Toward WKAR-FM - East Lansing, MI

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
166.0	010.0000	0156.3	039.0	359.1	087.0000	0277.4	101.4	53.83
167.0	010.0000	0156.0	039.0	358.7	087.0000	0277.2	101.3	53.86
168.0	010.0000	0155.6	038.9	358.3	087.0000	0277.2	101.2	53.88
169.0	010.0000	0155.3	038.9	357.9	087.0000	0277.2	101.2	53.91
170.0	010.0000	0155.0	038.8	357.6	087.0000	0277.3	101.1	53.93
171.0	010.0000	0154.8	038.8	357.2	087.0000	0277.4	101.0	53.95
172.0	010.0000	0154.6	038.8	356.8	087.0000	0277.4	101.0	53.97
173.0	010.0000	0154.3	038.8	356.4	087.0000	0277.5	101.0	53.97
174.0	010.0000	0154.0	038.7	356.0	087.0000	0277.5	101.0	53.97
175.0	010.0000	0153.8	038.7	355.7	087.0000	0277.5	101.0	53.97
176.0	010.0000	0153.5	038.7	355.3	087.0000	0277.4	101.0	53.95
177.0	010.0000	0153.0	038.6	354.9	087.0000	0277.2	101.1	53.93
178.0	010.0000	0152.8	038.6	354.5	087.0000	0277.0	101.2	53.90
179.0	010.0000	0152.6	038.6	354.2	087.0000	0276.8	101.2	53.87
180.0	010.0000	0152.3	038.5	353.8	087.0000	0276.5	101.3	53.84
181.0	010.0000	0152.2	038.5	353.4	087.0000	0276.2	101.4	53.79
182.0	010.0000	0151.9	038.5	353.0	087.0000	0275.9	101.6	53.75
183.0	010.0000	0151.7	038.5	352.7	087.0000	0275.9	101.7	53.70
184.0	010.0000	0151.4	038.4	352.3	087.0000	0275.8	101.9	53.66
185.0	010.0000	0151.2	038.4	351.9	087.0000	0275.8	102.0	53.60
186.0	010.0000	0151.0	038.4	351.6	087.0000	0275.7	102.2	53.54
187.0	010.0000	0150.7	038.3	351.2	087.0000	0275.7	102.4	53.48
188.0	010.0000	0150.5	038.3	350.9	087.0000	0275.6	102.6	53.41
189.0	010.0000	0150.2	038.3	350.5	087.0000	0275.6	102.9	53.34
190.0	010.0000	0150.0	038.2	350.2	087.0000	0275.5	103.1	53.26
191.0	010.0000	0149.7	038.2	349.9	087.0000	0275.5	103.4	53.18
192.0	010.0000	0149.5	038.2	349.5	087.0000	0275.5	103.6	53.11
193.0	010.0000	0149.3	038.2	349.2	087.0000	0275.6	103.9	53.02
194.0	010.0000	0149.1	038.1	348.9	087.0000	0275.6	104.2	52.93
195.0	010.0000	0148.7	038.1	348.6	087.0000	0275.6	104.6	52.83
196.0	010.0000	0148.4	038.1	348.3	087.0000	0275.5	104.9	52.73
197.0	010.0000	0148.1	038.0	347.9	087.0000	0275.5	105.2	52.63
198.0	010.0000	0147.9	038.0	347.6	087.0000	0275.5	105.6	52.53
199.0	010.0000	0147.5	037.9	347.4	087.0000	0275.5	106.0	52.42
200.0	010.0000	0146.9	037.9	347.1	087.0000	0275.5	106.4	52.30
201.0	010.0000	0146.5	037.8	346.8	087.0000	0275.5	106.8	52.18
202.0	010.0000	0146.1	037.8	346.5	087.0000	0275.5	107.2	52.07
203.0	010.0000	0145.7	037.7	346.3	087.0000	0275.7	107.6	51.95
204.0	010.0000	0145.2	037.7	346.0	087.0000	0275.8	108.1	51.83
205.0	010.0000	0144.8	037.6	345.8	087.0000	0275.9	108.5	51.71
206.0	010.0000	0144.5	037.6	345.5	087.0000	0275.9	109.0	51.58
207.0	010.0000	0144.1	037.5	345.3	087.0000	0276.0	109.5	51.46
208.0	010.0000	0143.7	037.5	345.0	087.0000	0276.0	109.9	51.33
209.0	010.0000	0143.1	037.4	344.8	087.0000	0276.0	110.4	51.20
210.0	010.0000	0142.6	037.4	344.6	087.0000	0276.0	110.9	51.07

Exhibit 18.2

Contour Protection Study Toward WKAR-FM - East Lansing, MI

01-19-2012

Terrain Data: USGS 03 SEC

FMOver Analysis

WKAR-FM BLED20110817ACF

WKKM.P

Channel = 213B

Max ERP = 87 kW

RCAMSL = 535.6 M

N. Lat. 42 42 07.0

W. Lng. 84 24 48.0

Protected

60 dBu

Channel = 214C3

Max ERP = 10 kW

RCAMSL = 382 M

N. Lat. 43 57 17.0

W. Lng. 84 32 59.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
311.0	087.0000	0274.8	068.9	203.6	010.0000	0145.5	102.5	39.90	
312.0	087.0000	0275.0	069.0	203.5	010.0000	0145.5	101.4	40.17	
313.0	087.0000	0275.5	069.0	203.3	010.0000	0145.6	100.2	40.46	
314.0	087.0000	0275.6	069.0	203.0	010.0000	0145.7	099.1	40.75	
315.0	087.0000	0275.7	069.0	202.8	010.0000	0145.8	098.0	41.05	
316.0	087.0000	0275.9	069.0	202.5	010.0000	0145.9	096.9	41.35	
317.0	087.0000	0275.8	069.0	202.2	010.0000	0146.0	095.8	41.65	
318.0	087.0000	0275.8	069.0	201.9	010.0000	0146.2	094.7	41.96	
319.0	087.0000	0275.7	069.0	201.5	010.0000	0146.3	093.6	42.26	
320.0	087.0000	0275.4	069.0	201.2	010.0000	0146.5	092.6	42.56	
321.0	087.0000	0275.0	068.9	200.8	010.0000	0146.6	091.5	42.86	
322.0	087.0000	0275.0	068.9	200.4	010.0000	0146.8	090.5	43.16	
323.0	087.0000	0275.2	069.0	200.0	010.0000	0146.9	089.5	43.46	
324.0	087.0000	0275.4	069.0	199.6	010.0000	0147.2	088.5	43.76	
325.0	087.0000	0275.4	069.0	199.1	010.0000	0147.4	087.5	44.06	
326.0	087.0000	0275.5	069.0	198.6	010.0000	0147.6	086.5	44.36	
327.0	087.0000	0275.4	069.0	198.1	010.0000	0147.8	085.6	44.65	
328.0	087.0000	0275.5	069.0	197.6	010.0000	0148.0	084.7	44.93	
329.0	087.0000	0275.5	069.0	197.1	010.0000	0148.1	083.8	45.21	
330.0	087.0000	0275.5	069.0	196.5	010.0000	0148.3	082.9	45.48	
331.0	087.0000	0275.5	069.0	195.9	010.0000	0148.4	082.0	45.75	
332.0	087.0000	0275.5	069.0	195.3	010.0000	0148.6	081.2	46.01	
333.0	087.0000	0275.6	069.0	194.7	010.0000	0148.9	080.4	46.27	
334.0	087.0000	0275.5	069.0	194.0	010.0000	0149.1	079.6	46.52	
335.0	087.0000	0275.5	069.0	193.3	010.0000	0149.2	078.8	46.75	
336.0	087.0000	0275.5	069.0	192.6	010.0000	0149.4	078.1	46.99	
337.0	087.0000	0275.6	069.0	191.9	010.0000	0149.5	077.4	47.22	
338.0	087.0000	0275.9	069.0	191.2	010.0000	0149.7	076.7	47.44	
339.0	087.0000	0276.0	069.0	190.4	010.0000	0149.8	076.0	47.64	
340.0	087.0000	0276.1	069.0	189.6	010.0000	0150.0	075.4	47.85	
341.0	087.0000	0276.1	069.0	188.8	010.0000	0150.2	074.8	48.04	
342.0	087.0000	0276.0	069.0	188.0	010.0000	0150.5	074.3	48.22	
343.0	087.0000	0276.0	069.0	187.2	010.0000	0150.7	073.8	48.39	

MUNN-REESE, INC.

Broadcast Engineering Consultants

COLDWATER, MI 49036

Exhibit 18.2

Contour Protection Study Toward WKAR-FM - East Lansing, MI

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
344.0	087.0000	0276.0	069.0	186.3	010.0000	0150.9	073.3	48.55
345.0	087.0000	0276.0	069.0	185.4	010.0000	0151.1	072.9	48.70
346.0	087.0000	0275.8	069.0	184.5	010.0000	0151.3	072.5	48.84
347.0	087.0000	0275.4	069.0	183.6	010.0000	0151.5	072.2	48.95
348.0	087.0000	0275.5	069.0	182.7	010.0000	0151.8	071.8	49.07
349.0	087.0000	0275.6	069.0	181.7	010.0000	0152.0	071.5	49.18
350.0	087.0000	0275.5	069.0	180.8	010.0000	0152.2	071.3	49.26
351.0	087.0000	0275.6	069.0	179.8	010.0000	0152.4	071.1	49.34
352.0	087.0000	0275.8	069.0	178.9	010.0000	0152.6	070.9	49.41
353.0	087.0000	0275.9	069.0	177.9	010.0000	0152.8	070.8	49.46
354.0	087.0000	0276.7	069.1	176.9	010.0000	0153.0	070.6	49.52
355.0	087.0000	0277.3	069.1	175.9	010.0000	0153.5	070.5	49.57
356.0	087.0000	0277.5	069.2	175.0	010.0000	0153.8	070.5	49.59
357.0	087.0000	0277.4	069.1	174.0	010.0000	0154.0	070.6	49.59
358.0	087.0000	0277.2	069.1	173.0	010.0000	0154.3	070.7	49.57
359.0	087.0000	0277.3	069.1	172.0	010.0000	0154.6	070.8	49.55
000.0	087.0000	0278.3	069.2	171.0	010.0000	0154.8	070.9	49.53
001.0	087.0000	0278.1	069.2	170.1	010.0000	0155.0	071.1	49.47
002.0	087.0000	0278.3	069.2	169.1	010.0000	0155.3	071.3	49.41
003.0	087.0000	0277.7	069.2	168.2	010.0000	0155.4	071.7	49.31
004.0	087.0000	0277.5	069.2	167.3	010.0000	0155.9	072.0	49.22
005.0	087.0000	0277.4	069.1	166.4	010.0000	0156.1	072.4	49.11
006.0	087.0000	0276.5	069.1	165.5	010.0000	0156.6	072.9	48.98
007.0	087.0000	0276.7	069.1	164.6	010.0000	0156.8	073.3	48.85
008.0	087.0000	0276.8	069.1	163.7	010.0000	0157.1	073.7	48.72
009.0	087.0000	0276.9	069.1	162.9	010.0000	0157.4	074.2	48.57
010.0	087.0000	0276.9	069.1	162.0	010.0000	0157.6	074.8	48.41
011.0	087.0000	0276.9	069.1	161.2	010.0000	0157.9	075.4	48.24
012.0	087.0000	0276.8	069.1	160.4	010.0000	0158.2	076.0	48.05
013.0	087.0000	0276.5	069.1	159.7	009.8765	0158.5	076.7	47.80
014.0	087.0000	0276.1	069.0	159.0	009.5924	0158.7	077.3	47.46
015.0	087.0000	0275.7	069.0	158.2	009.3216	0158.9	078.1	47.12
016.0	087.0000	0275.4	069.0	157.6	009.0621	0158.8	078.8	46.76
017.0	087.0000	0275.1	069.0	156.9	008.8145	0158.9	079.6	46.40
018.0	087.0000	0274.8	068.9	156.2	008.5782	0159.0	080.4	46.04
019.0	087.0000	0274.6	068.9	155.6	008.3524	0159.1	081.2	45.67
020.0	087.0000	0274.4	068.9	155.0	008.1388	0159.2	082.1	45.30
021.0	087.0000	0274.0	068.9	154.4	007.9379	0159.3	083.0	44.92
022.0	087.0000	0273.6	068.8	153.9	007.7473	0159.4	083.9	44.55
023.0	087.0000	0273.6	068.8	153.4	007.5612	0159.6	084.8	44.17
024.0	087.0000	0273.2	068.8	152.9	007.3896	0159.7	085.7	43.79
025.0	087.0000	0273.0	068.8	152.4	007.2256	0159.7	086.7	43.41
026.0	087.0000	0272.8	068.8	151.9	007.0711	0159.8	087.6	43.03
027.0	087.0000	0272.5	068.7	151.5	006.9259	0160.0	088.6	42.65
028.0	087.0000	0273.1	068.8	151.0	006.7763	0160.0	089.6	42.27
029.0	087.0000	0272.7	068.8	150.6	006.6492	0160.1	090.6	41.89
030.0	087.0000	0272.1	068.7	150.2	006.5324	0160.1	091.7	41.51

Exhibit 18.3

Contour Protection Study Toward WMSD.C - Rose Twp, MI

The Country King, Incorporated

FMCommander Single Allocation Study - 01-19-2012 - USGS 03 SEC
WKKM.P's Overlaps (In= 0.61 km, Out= 6.5 km)

WKKM.P CH 214 C3 DA
Lat= 43 57 17.0, Lng= 84 32 59.0
10.0 kW 129.6 M HAAT, 382 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WMSD-C CH 215 C3 DA BPED20091119AAF
Lat= 44 25 58.0, Lng= 84 00 33.0
15.0 kW 21 M HAAT, 335 M COR
Prot.= 60 dBu, Intef.= 54 dBu

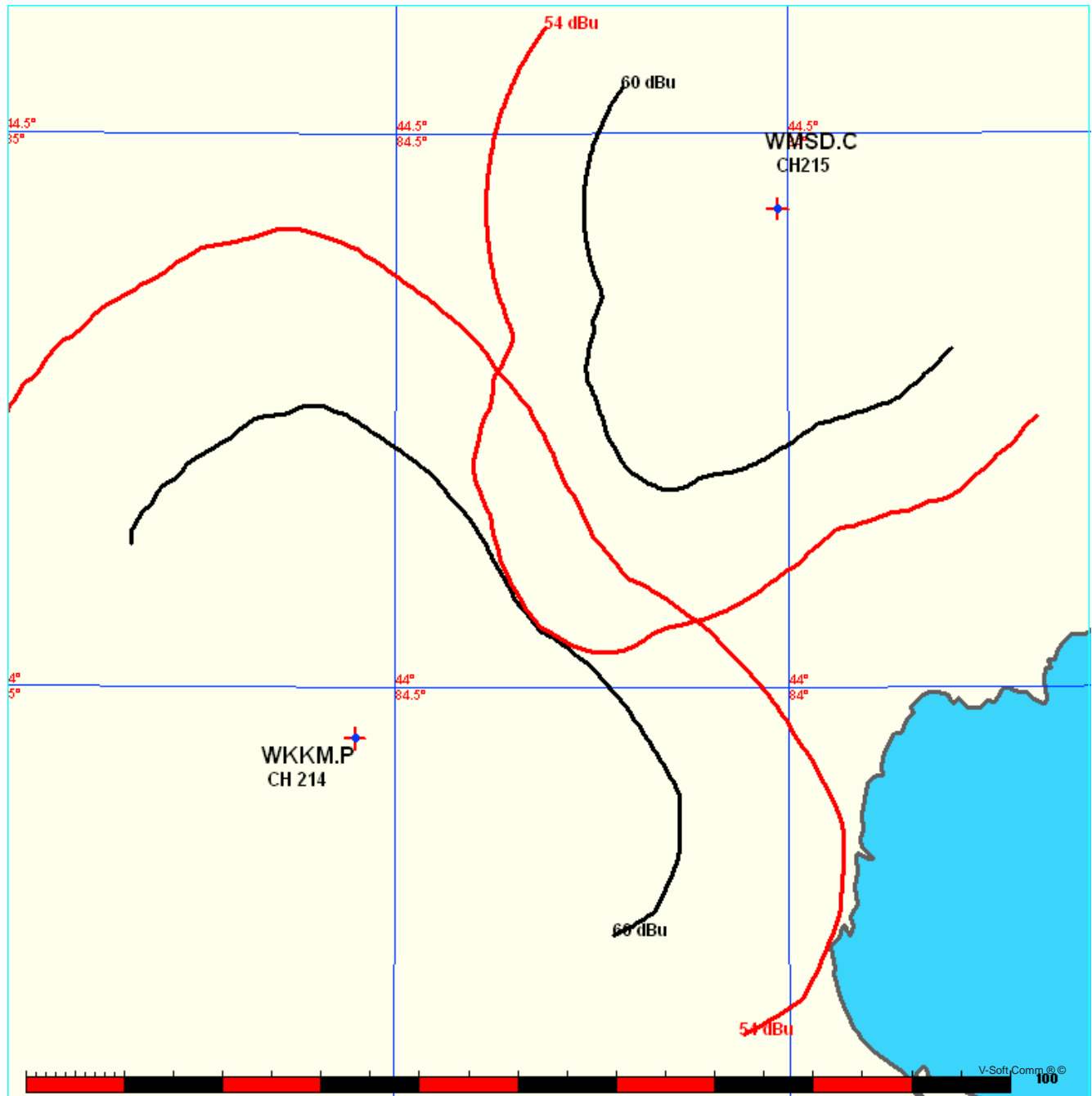


Exhibit 18.3

Contour Protection Study Toward WMSD.C - Rose Twp, MI

01-19-2012

Terrain Data: USGS 03 SEC

FMOver Analysis

WKKM.P

WMSD-C BPED20091119AAF

Channel = 214C3
Max ERP = 10 kW
RCAMSL = 382 M
N. Lat. 43 57 17.0
W. Lng. 84 32 59.0
Protected
60 dBu

Channel = 215C3
Max ERP = 15 kW
RCAMSL = 335 M
N. Lat. 44 25 58.0
W. Lng. 84 00 33.0
Interfering
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
355.0	008.9421	0114.4	033.1	246.5	015.0000	0028.8	050.1	47.68	
356.0	008.7376	0113.7	032.8	246.0	015.0000	0029.1	049.6	47.78	
357.0	008.5355	0113.1	032.6	245.4	015.0000	0029.8	049.2	47.87	
358.0	008.3357	0113.0	032.4	245.0	015.0000	0030.2	048.8	48.01	
359.0	008.1383	0112.0	032.0	244.3	015.0000	0030.6	048.4	48.16	
000.0	007.9433	0111.2	031.7	243.7	015.0000	0030.9	048.0	48.29	
001.0	007.6199	0110.5	031.3	243.0	015.0000	0031.9	047.7	48.55	
002.0	007.3032	0110.3	031.0	242.3	015.0000	0033.0	047.4	48.82	
003.0	006.9933	0110.0	030.6	241.6	015.0000	0034.1	047.1	49.07	
004.0	006.6901	0110.4	030.4	241.0	015.0000	0035.0	046.8	49.31	
005.0	006.3936	0110.5	030.1	240.3	015.0000	0036.3	046.6	49.62	
006.0	006.1038	0110.7	029.8	239.6	015.0000	0037.6	046.3	49.91	
007.0	005.8207	0111.3	029.5	239.0	015.0000	0037.9	046.1	50.04	
008.0	005.5444	0112.1	029.3	238.4	015.0000	0038.4	045.8	50.20	
009.0	005.2748	0112.9	029.1	237.7	015.0000	0038.8	045.6	50.33	
010.0	005.0119	0113.5	028.8	237.1	015.0000	0039.6	045.4	50.51	
011.0	004.8078	0113.8	028.6	236.4	015.0000	0040.3	045.2	50.70	
012.0	004.6080	0114.0	028.3	235.7	015.0000	0041.5	045.0	50.96	
013.0	004.4125	0114.9	028.1	235.1	015.0000	0043.2	044.8	51.31	
014.0	004.2212	0115.3	027.9	234.4	015.0000	0044.4	044.7	51.55	
015.0	004.0341	0115.6	027.6	233.8	015.0000	0045.4	044.6	51.75	
016.0	003.8512	0116.9	027.5	233.2	015.0000	0046.2	044.4	51.93	
017.0	003.6726	0117.4	027.2	232.5	015.0000	0047.6	044.3	52.18	
018.0	003.4983	0117.5	027.0	231.8	015.0000	0049.1	044.3	52.43	
019.0	003.3282	0117.2	026.6	231.0	015.0000	0050.6	044.3	52.64	
020.0	003.1623	0116.9	026.3	230.3	015.0000	0051.3	044.3	52.73	
021.0	003.0335	0116.8	026.0	229.6	015.0000	0052.3	044.3	52.86	
022.0	002.9075	0117.3	025.8	229.0	015.0000	0052.9	044.3	52.97	
023.0	002.7841	0118.0	025.7	228.4	015.0000	0053.5	044.3	53.06	
024.0	002.6634	0118.6	025.5	227.7	015.0000	0053.9	044.3	53.12	
025.0	002.5453	0119.2	025.3	227.1	015.0000	0054.2	044.3	53.14	
026.0	002.4300	0120.2	025.1	226.5	015.0000	0054.5	044.3	53.18	
027.0	002.3173	0121.6	024.9	225.9	015.0000	0055.2	044.3	53.28	
028.0	002.2073	0122.2	024.7	225.3	015.0000	0055.8	044.4	53.34	
029.0	002.0999	0122.8	024.5	224.6	015.0000	0056.3	044.5	53.36	

Exhibit 18.3

Contour Protection Study Toward WMSD.C - Rose Twp, MI

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
030.0	001.9953	0123.1	024.2	224.0	015.0000	0056.6	044.6	53.35
031.0	001.9140	0123.5	024.0	223.5	015.0000	0057.2	044.7	53.40
032.0	001.8345	0123.9	023.8	222.9	015.0000	0058.2	044.8	53.48
033.0	001.7566	0124.4	023.7	222.3	015.0000	0059.2	044.9	53.56
034.0	001.6805	0124.7	023.4	221.8	015.0000	0060.0	045.1	53.60
035.0	001.6060	0125.1	023.2	221.2	015.0000	0060.8	045.3	53.63
036.0	001.5332	0125.6	023.0	220.7	015.0000	0061.5	045.4	53.65
037.0	001.4621	0126.2	022.8	220.2	015.0000	0062.6	045.6	53.70
038.0	001.3927	0127.0	022.6	219.7	015.0000	0063.6	045.8	53.75
039.0	001.3250	0128.0	022.4	219.2	015.0000	0064.5	046.0	53.79
040.0	001.2589	0129.0	022.3	218.7	015.0000	0065.2	046.2	53.80
041.0	001.2254	0130.0	022.2	218.2	015.0000	0065.8	046.2	53.84
042.0	001.1923	0131.0	022.1	217.7	015.0000	0066.5	046.3	53.87
043.0	001.1597	0131.5	022.0	217.3	015.0000	0067.1	046.5	53.89
044.0	001.1276	0131.7	021.9	216.8	015.0000	0067.8	046.6	53.90
045.0	001.0958	0132.0	021.8	216.4	015.0000	0068.5	046.8	53.91
046.0	001.0646	0132.6	021.7	215.9	015.0000	0068.9	047.0	53.90
047.0	001.0338	0133.5	021.6	215.5	015.0000	0069.3	047.1	53.89
048.0	001.0034	0133.9	021.5	215.1	015.0000	0069.8	047.3	53.87
049.0	000.9735	0134.4	021.3	214.7	015.0000	0070.4	047.5	53.86
050.0	000.9441	0135.1	021.2	214.3	015.0000	0071.0	047.7	53.86
051.0	000.9387	0136.1	021.3	213.9	015.0000	0071.7	047.8	53.90
052.0	000.9334	0137.1	021.3	213.4	015.0000	0072.4	047.9	53.94
053.0	000.9281	0138.0	021.4	213.0	015.0000	0072.9	048.0	53.96
054.0	000.9228	0138.7	021.4	212.6	015.0000	0073.4	048.1	53.97
055.0	000.9175	0139.3	021.4	212.1	015.0000	0073.8	048.2	53.97
056.0	000.9122	0139.8	021.4	211.7	015.0000	0074.2	048.4	53.96
057.0	000.9069	0140.6	021.4	211.3	015.0000	0074.7	048.5	53.96
058.0	000.9017	0141.5	021.5	210.9	015.0000	0075.1	048.6	53.95
059.0	000.8965	0142.4	021.5	210.5	015.0000	0075.5	048.8	53.93
060.0	000.8913	0143.3	021.5	210.1	015.0000	0075.7	048.9	53.91
061.0	000.9315	0144.0	021.8	209.6	014.8521	0076.1	048.9	53.92
062.0	000.9726	0144.6	022.1	209.0	014.6726	0076.6	048.9	53.91
063.0	001.0146	0144.9	022.3	208.5	014.4970	0077.1	048.9	53.90
064.0	001.0575	0145.2	022.5	207.9	014.3242	0077.8	048.9	53.90
065.0	001.1013	0145.7	022.8	207.4	014.1486	0078.5	049.0	53.90
066.0	001.1460	0146.1	023.0	206.9	013.9744	0079.3	049.0	53.89
067.0	001.1915	0146.6	023.3	206.3	013.8002	0079.8	049.1	53.86
068.0	001.2380	0147.2	023.5	205.8	013.6285	0080.3	049.2	53.82
069.0	001.2853	0147.7	023.7	205.2	013.4583	0080.6	049.3	53.76
070.0	001.3335	0148.0	024.0	204.7	013.2942	0081.0	049.4	53.69
071.0	001.4035	0148.1	024.2	204.1	013.1142	0081.5	049.6	53.64
072.0	001.4752	0148.2	024.5	203.6	012.9388	0082.0	049.7	53.57
073.0	001.5487	0148.2	024.8	203.0	012.7662	0082.3	049.8	53.49
074.0	001.6241	0148.2	025.1	202.5	012.5987	0082.4	050.0	53.38
075.0	001.7012	0147.8	025.3	202.0	012.4418	0082.3	050.2	53.24

Exhibit 18.3

Contour Protection Study Toward WMSD.C - Rose Twp, MI

01-19-2012 Terrain Data: USGS 03 SEC FMOver Analysis

WMSD-C BPED20091119AAF WKKM.P

Channel = 215C3	Channel = 214C3
Max ERP = 15 kW	Max ERP = 10 kW
RCAMSL = 335 M	RCAMSL = 382 M
N. Lat. 44 25 58.0	N. Lat. 43 57 17.0
W. Lng. 84 00 33.0	W. Lng. 84 32 59.0
Protected	Interfering
60 dBu	54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
174.0	004.5739	0071.4	022.7	056.0	000.9124	0139.8	054.8	43.92	
175.0	004.7545	0071.3	022.9	055.9	000.9125	0139.8	054.4	44.09	
176.0	004.9387	0071.9	023.2	056.0	000.9121	0139.9	053.9	44.28	
177.0	005.1264	0072.7	023.5	056.1	000.9117	0139.9	053.4	44.48	
178.0	005.3175	0072.8	023.7	056.1	000.9119	0139.9	052.9	44.66	
179.0	005.5122	0072.7	023.9	056.0	000.9123	0139.8	052.5	44.83	
180.0	005.7103	0072.8	024.1	055.9	000.9126	0139.8	052.0	45.01	
181.0	005.9497	0073.2	024.4	055.9	000.9126	0139.8	051.5	45.20	
182.0	006.1940	0073.5	024.7	055.9	000.9128	0139.8	051.0	45.40	
183.0	006.4432	0073.9	025.0	055.9	000.9129	0139.8	050.5	45.60	
184.0	006.6974	0074.3	025.3	055.8	000.9132	0139.7	050.0	45.80	
185.0	006.9564	0074.7	025.5	055.7	000.9135	0139.7	049.4	46.00	
186.0	007.2204	0074.9	025.8	055.6	000.9141	0139.7	048.9	46.20	
187.0	007.4893	0075.4	026.1	055.5	000.9146	0139.6	048.4	46.40	
188.0	007.7630	0075.8	026.3	055.4	000.9152	0139.6	047.9	46.61	
189.0	008.0418	0076.0	026.6	055.3	000.9161	0139.4	047.4	46.80	
190.0	008.3254	0075.9	026.8	055.0	000.9172	0139.3	046.9	46.98	
191.0	008.6503	0075.8	027.0	054.8	000.9184	0139.2	046.5	47.17	
192.0	008.9815	0075.4	027.1	054.5	000.9200	0139.0	046.0	47.35	
193.0	009.3189	0075.2	027.3	054.3	000.9214	0138.8	045.6	47.54	
194.0	009.6625	0075.1	027.5	054.0	000.9229	0138.7	045.1	47.73	
195.0	010.0123	0074.9	027.7	053.7	000.9246	0138.5	044.6	47.92	
196.0	010.3684	0075.2	028.0	053.4	000.9260	0138.3	044.1	48.13	
197.0	010.7307	0076.1	028.4	053.2	000.9272	0138.1	043.5	48.37	
198.0	011.0992	0078.2	028.9	053.1	000.9277	0138.1	042.8	48.70	
199.0	011.4739	0080.2	029.5	053.0	000.9283	0138.0	042.0	49.03	
200.0	011.8548	0081.3	029.9	052.7	000.9298	0137.7	041.4	49.30	
201.0	012.1527	0081.9	030.2	052.3	000.9319	0137.4	040.9	49.52	
202.0	012.4543	0082.3	030.4	051.8	000.9344	0136.9	040.4	49.72	
203.0	012.7596	0082.3	030.6	051.3	000.9373	0136.4	040.0	49.89	
204.0	013.0685	0081.6	030.7	050.6	000.9407	0135.7	039.7	50.00	
205.0	013.3812	0080.8	030.7	049.9	000.9457	0135.1	039.4	50.10	
206.0	013.6976	0080.0	030.7	049.2	000.9662	0134.5	039.2	50.28	

Exhibit 18.3

Contour Protection Study Toward WMSD.C - Rose Twp, MI

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
207.0	014.0176	0079.1	030.7	048.5	000.9878	0134.2	039.0	50.44
208.0	014.3414	0077.7	030.6	047.7	001.0113	0133.8	038.9	50.57
209.0	014.6688	0076.6	030.6	047.0	001.0348	0133.4	038.8	50.71
210.0	015.0000	0075.8	030.6	046.2	001.0578	0132.8	038.6	50.84
211.0	015.0000	0075.0	030.4	045.4	001.0832	0132.2	038.6	50.91
212.0	015.0000	0074.0	030.2	044.6	001.1094	0131.8	038.7	50.96
213.0	015.0000	0072.9	030.0	043.7	001.1356	0131.7	038.8	51.01
214.0	015.0000	0071.5	029.8	042.9	001.1622	0131.5	038.9	51.02
215.0	015.0000	0070.0	029.5	042.1	001.1886	0131.1	039.1	51.00
216.0	015.0000	0068.9	029.3	041.3	001.2142	0130.3	039.3	50.98
217.0	015.0000	0067.6	029.0	040.6	001.2397	0129.6	039.5	50.94
218.0	015.0000	0066.2	028.8	039.8	001.2705	0128.8	039.7	50.89
219.0	015.0000	0064.7	028.5	039.1	001.3185	0128.1	040.0	50.89
220.0	015.0000	0062.8	028.1	038.4	001.3656	0127.4	040.4	50.85
221.0	015.0000	0061.1	027.8	037.7	001.4117	0126.8	040.7	50.81
222.0	015.0000	0059.8	027.6	037.1	001.4571	0126.2	041.0	50.79
223.0	015.0000	0057.9	027.2	036.5	001.5005	0125.8	041.4	50.72
224.0	015.0000	0056.6	026.9	035.9	001.5434	0125.5	041.7	50.68
225.0	015.0000	0056.0	026.8	035.2	001.5878	0125.3	041.9	50.70
226.0	015.0000	0055.0	026.6	034.7	001.6300	0125.0	042.2	50.67
227.0	015.0000	0054.2	026.4	034.1	001.6720	0124.8	042.5	50.65
228.0	015.0000	0053.8	026.3	033.5	001.7150	0124.6	042.7	50.67
229.0	015.0000	0052.9	026.1	033.0	001.7551	0124.4	043.0	50.63
230.0	015.0000	0051.8	025.9	032.5	001.7921	0124.2	043.4	50.54
231.0	015.0000	0050.6	025.6	032.1	001.8275	0124.0	043.8	50.45
232.0	015.0000	0048.6	025.1	031.8	001.8540	0123.7	044.4	50.25
233.0	015.0000	0046.5	024.6	031.5	001.8759	0123.6	045.0	50.02
234.0	015.0000	0045.0	024.2	031.2	001.9020	0123.5	045.5	49.87
235.0	015.0000	0043.6	023.8	030.9	001.9256	0123.4	046.0	49.71
236.0	015.0000	0041.0	023.1	030.7	001.9346	0123.4	046.8	49.41
237.0	015.0000	0039.6	022.8	030.5	001.9548	0123.2	047.3	49.25
238.0	015.0000	0038.6	022.5	030.2	001.9774	0123.2	047.8	49.13
239.0	015.0000	0037.9	022.3	029.9	002.0040	0123.1	048.1	49.05
240.0	015.0000	0037.0	022.0	029.7	002.0304	0123.0	048.5	48.94
241.0	015.0000	0034.9	021.5	029.6	002.0345	0123.0	049.2	48.68
242.0	015.0000	0033.4	021.0	029.5	002.0454	0123.0	049.8	48.48
243.0	015.0000	0031.9	020.6	029.4	002.0548	0122.9	050.3	48.29
244.0	015.0000	0030.7	020.3	029.3	002.0678	0122.9	050.8	48.13
245.0	015.0000	0030.2	020.1	029.1	002.0924	0122.9	051.1	48.05
246.0	015.0000	0029.1	020.1	028.8	002.1219	0122.7	051.4	48.00
247.0	015.0000	0028.7	020.1	028.5	002.1549	0122.6	051.6	47.98
248.0	015.0000	0028.4	020.1	028.2	002.1874	0122.4	051.8	47.94
249.0	015.0000	0028.2	020.1	027.9	002.2194	0122.1	052.0	47.91
250.0	015.0000	0027.4	020.1	027.6	002.2509	0122.0	052.3	47.87
251.0	015.0000	0025.2	020.1	027.3	002.2818	0121.8	052.5	47.82
252.0	015.0000	0022.3	020.1	027.0	002.3122	0121.6	052.8	47.78
253.0	015.0000	0019.1	020.1	026.8	002.3420	0121.3	053.0	47.72
254.0	015.0000	0016.3	020.1	026.5	002.3710	0121.0	053.3	47.66

Exhibit 18.4

Contour Protection Study Toward WTRK(FM) - Freeland, MI

The Country King, Incorporated

FMCommander Single Allocation Study - 01-19-2012 - USGS 03 SEC
WKKM.P's Overlaps (In= 10.57 km, Out= 1.27 km)

WKKM.P CH 214 C3 DA
Lat= 43 57 17.0, Lng= 84 32 59.0
10.0 kW 129.6 M HAAT, 382 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WTRK CH 215 A BLED20061113AFY
Lat= 43 33 42.0, Lng= 83 58 52.0
0.43 kW 98.8 M HAAT, 289 M COR
Prot.= 60 dBu, Intef.= 54 dBu

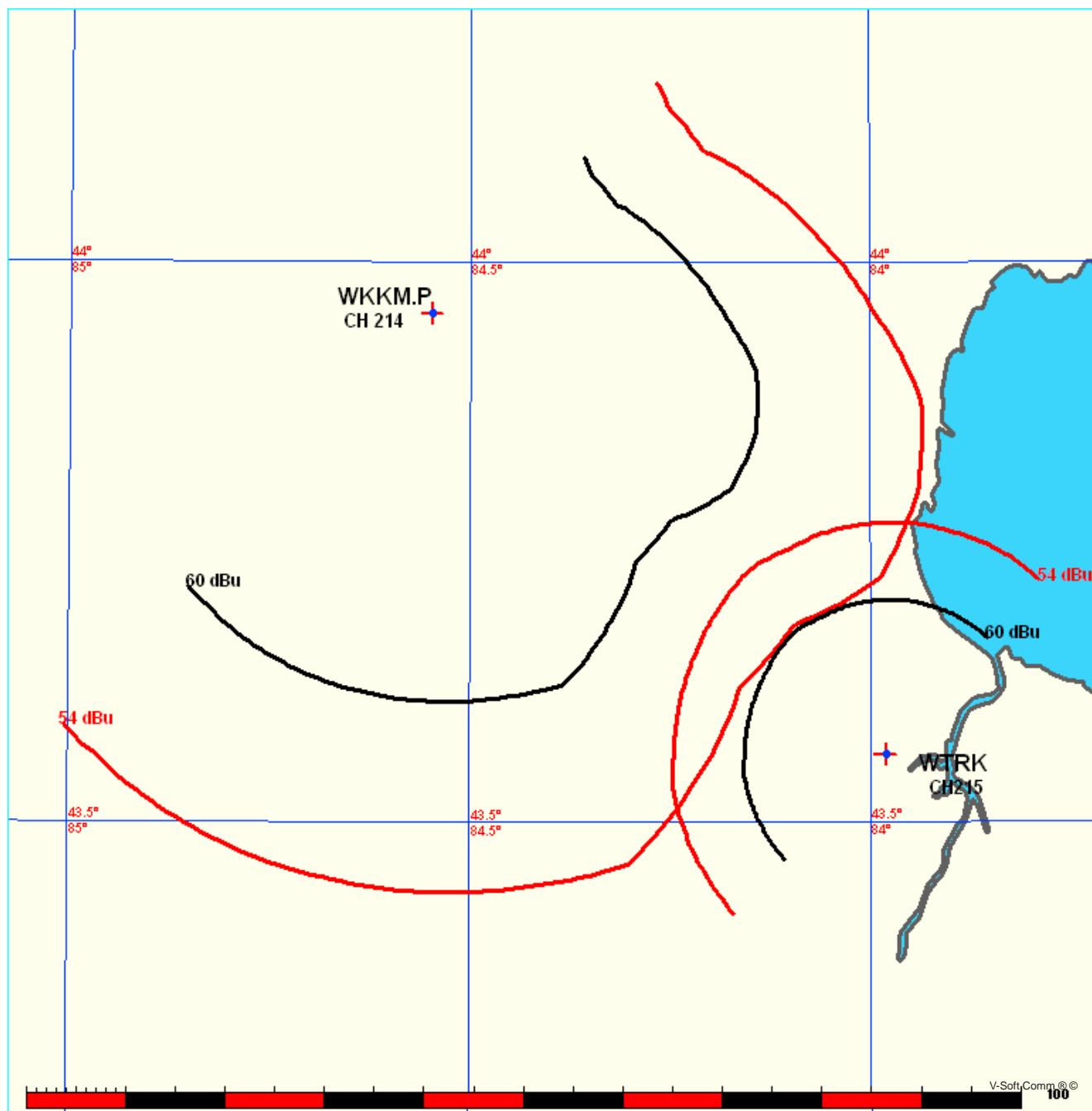


Exhibit 18.4

Contour Protection Study Toward WTRK(FM) - Freeland, MI

01-19-2012

Terrain Data: USGS 03 SEC

FMOver Analysis

WKKM.P

WTRK BLED20061113AFY

Channel = 214C3

Max ERP = 10 kW

RCAMSL = 382 M

N. Lat. 43 57 17.0

W. Lng. 84 32 59.0

Protected

60 dBu

Channel = 215A

Max ERP = 0.43 kW

RCAMSL = 289 M

N. Lat. 43 33 42.0

W. Lng. 83 58 52.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
090.0	003.3497	0148.8	029.5	339.7	000.4300	0103.3	046.6	41.68	
091.0	003.5254	0149.1	029.9	339.9	000.4300	0103.3	046.0	41.92	
092.0	003.7056	0149.3	030.3	340.1	000.4300	0103.3	045.4	42.16	
093.0	003.8903	0149.6	030.6	340.3	000.4300	0103.4	044.7	42.42	
094.0	004.0794	0149.9	031.0	340.4	000.4300	0103.4	044.1	42.68	
095.0	004.2731	0150.3	031.4	340.6	000.4300	0103.4	043.4	42.94	
096.0	004.4713	0150.6	031.8	340.7	000.4300	0103.4	042.8	43.21	
097.0	004.6739	0151.0	032.2	340.9	000.4300	0103.4	042.1	43.49	
098.0	004.8811	0151.4	032.6	341.0	000.4300	0103.5	041.4	43.77	
099.0	005.0927	0151.8	033.0	341.1	000.4300	0103.5	040.7	44.06	
100.0	005.3088	0152.1	033.3	341.2	000.4300	0103.5	040.1	44.36	
101.0	005.3917	0152.5	033.5	341.0	000.4300	0103.5	039.5	44.61	
102.0	005.4751	0152.9	033.7	340.8	000.4300	0103.4	038.9	44.86	
103.0	005.5592	0153.2	033.8	340.5	000.4300	0103.4	038.3	45.11	
104.0	005.6440	0153.4	034.0	340.2	000.4300	0103.3	037.7	45.36	
105.0	005.7294	0153.6	034.1	339.9	000.4300	0103.3	037.1	45.61	
106.0	005.8154	0153.8	034.3	339.5	000.4300	0103.3	036.6	45.87	
107.0	005.9021	0154.2	034.4	339.1	000.4300	0103.2	036.0	46.12	
108.0	005.9894	0154.5	034.6	338.7	000.4300	0103.1	035.4	46.37	
109.0	006.0774	0154.8	034.7	338.3	000.4300	0103.0	034.9	46.62	
110.0	006.1659	0155.1	034.9	337.8	000.4300	0102.8	034.3	46.86	
111.0	006.1659	0155.3	034.9	337.1	000.4300	0102.7	033.9	47.07	
112.0	006.1659	0155.3	034.9	336.4	000.4300	0102.6	033.4	47.26	
113.0	006.1659	0155.5	034.9	335.6	000.4300	0102.5	033.0	47.46	
114.0	006.1659	0155.6	034.9	334.8	000.4300	0102.4	032.6	47.65	
115.0	006.1659	0155.7	035.0	334.0	000.4300	0102.5	032.2	47.85	
116.0	006.1659	0155.9	035.0	333.2	000.4300	0102.6	031.8	48.05	
117.0	006.1659	0155.9	035.0	332.3	000.4300	0102.7	031.4	48.24	
118.0	006.1659	0155.8	035.0	331.4	000.4300	0102.9	031.1	48.43	
119.0	006.1659	0155.8	035.0	330.4	000.4300	0103.2	030.8	48.63	
120.0	006.1659	0155.9	035.0	329.4	000.4300	0103.5	030.5	48.83	
121.0	005.9373	0155.9	034.7	328.2	000.4300	0104.0	030.4	48.89	
122.0	005.7130	0156.1	034.4	326.9	000.4300	0104.3	030.4	48.91	
123.0	005.4929	0156.4	034.1	325.6	000.4300	0104.4	030.5	48.90	
124.0	005.2772	0156.7	033.8	324.4	000.4300	0104.2	030.5	48.86	

MUNN-REESE, INC.

Broadcast Engineering Consultants

COLDWATER, MI 49036

Exhibit 18.4

Contour Protection Study Toward WTRK(FM) - Freeland, MI

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
125.0	005.0659	0156.9	033.5	323.2	000.4300	0103.9	030.6	48.78
126.0	004.8588	0157.1	033.2	322.0	000.4300	0103.6	030.7	48.68
127.0	004.6561	0157.4	032.8	320.8	000.4300	0103.2	030.9	48.56
128.0	004.4577	0157.7	032.5	319.6	000.4300	0102.8	031.1	48.43
129.0	004.2636	0158.0	032.2	318.5	000.4300	0102.3	031.3	48.27
130.0	004.0738	0158.1	031.8	317.4	000.4300	0101.9	031.6	48.10
131.0	004.0738	0158.3	031.9	316.4	000.4300	0101.5	031.5	48.10
132.0	004.0738	0158.7	031.9	315.4	000.4300	0101.1	031.4	48.11
133.0	004.0738	0159.1	031.9	314.4	000.4300	0100.7	031.4	48.10
134.0	004.0738	0159.7	032.0	313.4	000.4300	0100.2	031.3	48.09
135.0	004.0738	0160.1	032.1	312.4	000.4300	0099.8	031.3	48.07
136.0	004.0738	0160.4	032.1	311.3	000.4300	0099.4	031.3	48.02
137.0	004.0738	0160.7	032.1	310.3	000.4300	0099.0	031.3	47.98
138.0	004.0738	0161.0	032.1	309.3	000.4300	0098.5	031.3	47.91
139.0	004.0738	0161.5	032.2	308.2	000.4300	0098.1	031.4	47.85
140.0	004.0738	0161.6	032.2	307.2	000.4300	0097.7	031.5	47.76
141.0	004.2875	0161.5	032.6	306.1	000.4300	0097.3	031.2	47.86
142.0	004.5067	0161.5	033.0	304.8	000.4300	0096.9	031.0	47.93
143.0	004.7313	0161.5	033.4	303.6	000.4300	0096.4	030.8	47.99
144.0	004.9614	0161.4	033.8	302.3	000.4300	0096.0	030.7	48.02
145.0	005.1969	0161.3	034.2	301.0	000.4300	0095.7	030.6	48.05
146.0	005.4379	0161.1	034.5	299.7	000.4300	0095.4	030.5	48.06
147.0	005.6844	0160.9	034.9	298.4	000.4300	0095.1	030.5	48.04
148.0	005.9363	0160.7	035.2	297.1	000.4300	0094.7	030.5	47.99
149.0	006.1937	0160.4	035.5	295.8	000.4300	0094.5	030.5	47.94
150.0	006.4565	0160.2	035.8	294.5	000.4300	0094.3	030.6	47.87
151.0	006.7761	0160.0	036.2	293.1	000.4300	0093.8	030.7	47.78
152.0	007.1035	0159.8	036.6	291.8	000.4300	0093.5	030.8	47.69
153.0	007.4385	0159.6	036.9	290.5	000.4300	0093.4	031.0	47.60
154.0	007.7813	0159.4	037.3	289.2	000.4300	0093.2	031.2	47.48
155.0	008.1318	0159.3	037.6	287.9	000.4300	0093.2	031.4	47.36
156.0	008.4900	0159.1	038.0	286.6	000.4300	0093.1	031.7	47.21
157.0	008.8559	0158.9	038.3	285.4	000.4300	0092.9	032.0	47.04
158.0	009.2295	0158.9	038.6	284.2	000.4300	0092.8	032.3	46.88
159.0	009.6109	0158.7	038.9	283.1	000.4300	0092.7	032.7	46.69
160.0	010.0000	0158.4	039.2	282.0	000.4300	0092.7	033.1	46.50
161.0	010.0000	0158.0	039.2	281.5	000.4300	0092.7	033.7	46.21
162.0	010.0000	0157.6	039.1	281.0	000.4300	0092.6	034.3	45.92
163.0	010.0000	0157.3	039.1	280.5	000.4300	0092.6	035.0	45.64
164.0	010.0000	0157.0	039.1	280.0	000.4300	0092.7	035.6	45.36
165.0	010.0000	0156.7	039.0	279.6	000.4300	0092.6	036.2	45.08
166.0	010.0000	0156.3	039.0	279.3	000.4300	0092.6	036.8	44.79
167.0	010.0000	0156.0	039.0	278.9	000.4300	0092.6	037.5	44.51
168.0	010.0000	0155.6	038.9	278.6	000.4300	0092.6	038.1	44.23
169.0	010.0000	0155.3	038.9	278.3	000.4300	0092.6	038.8	43.95
170.0	010.0000	0155.0	038.8	278.1	000.4300	0092.5	039.4	43.67

Exhibit 18.4

Contour Protection Study Toward WTRK(FM) - Freeland, MI

01-19-2012

Terrain Data: USGS 03 SEC

FMOver Analysis

WTRK BLED20061113AFY

WKKM.P

Channel = 215A

Max ERP = 0.43 kW

RCAMSL = 289 M

N. Lat. 43 33 42.0

W. Lng. 83 58 52.0

Protected

60 dBu

Channel = 214C3

Max ERP = 10 kW

RCAMSL = 382 M

N. Lat. 43 57 17.0

W. Lng. 84 32 59.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
269.0	000.4300	0093.2	014.2	144.2	005.0150	0161.4	054.1	52.73	
270.0	000.4300	0093.0	014.2	144.1	004.9762	0161.4	053.9	52.77	
271.0	000.4300	0092.9	014.2	143.9	004.9378	0161.4	053.7	52.82	
272.0	000.4300	0092.8	014.2	143.7	004.8998	0161.4	053.5	52.86	
273.0	000.4300	0092.8	014.2	143.6	004.8608	0161.5	053.3	52.90	
274.0	000.4300	0092.7	014.2	143.4	004.8209	0161.5	053.1	52.94	
275.0	000.4300	0092.7	014.2	143.2	004.7806	0161.5	052.9	52.97	
276.0	000.4300	0092.7	014.2	143.0	004.7396	0161.5	052.7	53.01	
277.0	000.4300	0092.6	014.2	142.8	004.6966	0161.5	052.6	53.03	
278.0	000.4300	0092.5	014.1	142.7	004.6530	0161.5	052.4	53.06	
279.0	000.4300	0092.6	014.1	142.5	004.6099	0161.5	052.2	53.09	
280.0	000.4300	0092.7	014.2	142.3	004.5669	0161.5	052.0	53.11	
281.0	000.4300	0092.6	014.2	142.1	004.5208	0161.5	051.9	53.13	
282.0	000.4300	0092.7	014.2	141.9	004.4768	0161.5	051.7	53.15	
283.0	000.4300	0092.7	014.2	141.7	004.4303	0161.6	051.6	53.17	
284.0	000.4300	0092.8	014.2	141.4	004.3837	0161.6	051.4	53.19	
285.0	000.4300	0092.8	014.2	141.2	004.3360	0161.6	051.2	53.20	
286.0	000.4300	0093.0	014.2	141.0	004.2890	0161.5	051.1	53.21	
287.0	000.4300	0093.1	014.2	140.8	004.2410	0161.5	050.9	53.22	
288.0	000.4300	0093.2	014.2	140.6	004.1921	0161.5	050.8	53.22	
289.0	000.4300	0093.2	014.2	140.3	004.1420	0161.6	050.7	53.22	
290.0	000.4300	0093.4	014.2	140.1	004.0924	0161.6	050.5	53.23	
291.0	000.4300	0093.5	014.2	139.8	004.0738	0161.6	050.4	53.25	
292.0	000.4300	0093.6	014.2	139.6	004.0738	0161.6	050.3	53.30	
293.0	000.4300	0093.8	014.2	139.4	004.0738	0161.5	050.1	53.35	
294.0	000.4300	0094.1	014.3	139.1	004.0738	0161.5	050.0	53.40	
295.0	000.4300	0094.4	014.3	138.9	004.0738	0161.5	049.9	53.45	
296.0	000.4300	0094.5	014.3	138.6	004.0738	0161.4	049.8	53.49	
297.0	000.4300	0094.7	014.3	138.4	004.0738	0161.2	049.7	53.52	
298.0	000.4300	0094.9	014.3	138.1	004.0738	0161.1	049.6	53.55	
299.0	000.4300	0095.2	014.4	137.8	004.0738	0161.0	049.5	53.59	
300.0	000.4300	0095.5	014.4	137.6	004.0738	0161.0	049.4	53.63	
301.0	000.4300	0095.7	014.4	137.3	004.0738	0160.9	049.3	53.66	

Exhibit 18.4

Contour Protection Study Toward WTRK(FM) - Freeland, MI

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
302.0	000.4300	0095.9	014.4	137.0	004.0738	0160.7	049.2	53.68
303.0	000.4300	0096.2	014.4	136.7	004.0738	0160.6	049.1	53.71
304.0	000.4300	0096.6	014.5	136.5	004.0738	0160.4	049.0	53.74
305.0	000.4300	0097.0	014.5	136.2	004.0738	0160.4	048.9	53.76
306.0	000.4300	0097.3	014.5	135.9	004.0738	0160.4	048.8	53.79
307.0	000.4300	0097.6	014.6	135.6	004.0738	0160.4	048.8	53.82
308.0	000.4300	0098.0	014.6	135.3	004.0738	0160.4	048.7	53.85
309.0	000.4300	0098.4	014.6	135.0	004.0738	0160.1	048.7	53.86
310.0	000.4300	0098.8	014.6	134.7	004.0738	0159.9	048.6	53.87
311.0	000.4300	0099.2	014.7	134.4	004.0738	0159.8	048.5	53.89
312.0	000.4300	0099.6	014.7	134.1	004.0738	0159.7	048.5	53.90
313.0	000.4300	0100.0	014.7	133.8	004.0738	0159.6	048.5	53.91
314.0	000.4300	0100.5	014.8	133.5	004.0738	0159.4	048.4	53.91
315.0	000.4300	0100.9	014.8	133.2	004.0738	0159.2	048.4	53.91
316.0	000.4300	0101.3	014.8	132.9	004.0738	0159.0	048.4	53.92
317.0	000.4300	0101.7	014.9	132.6	004.0738	0159.0	048.3	53.92
318.0	000.4300	0102.1	014.9	132.3	004.0738	0158.9	048.3	53.92
319.0	000.4300	0102.5	014.9	132.0	004.0738	0158.7	048.3	53.91
320.0	000.4300	0102.9	015.0	131.7	004.0738	0158.6	048.3	53.90
321.0	000.4300	0103.3	015.0	131.3	004.0738	0158.5	048.3	53.89
322.0	000.4300	0103.6	015.0	131.0	004.0738	0158.4	048.4	53.88
323.0	000.4300	0103.9	015.0	130.7	004.0738	0158.3	048.4	53.87
324.0	000.4300	0104.1	015.1	130.4	004.0738	0158.2	048.4	53.85
325.0	000.4300	0104.3	015.1	130.1	004.0738	0158.2	048.5	53.83
326.0	000.4300	0104.4	015.1	129.8	004.1103	0158.1	048.5	53.84
327.0	000.4300	0104.3	015.1	129.5	004.1663	0158.1	048.6	53.86
328.0	000.4300	0104.1	015.1	129.2	004.2208	0158.0	048.7	53.88
329.0	000.4300	0103.6	015.0	128.9	004.2739	0157.9	048.8	53.88
330.0	000.4300	0103.2	015.0	128.7	004.3270	0157.9	049.0	53.89
331.0	000.4300	0103.0	015.0	128.4	004.3803	0157.8	049.1	53.89
332.0	000.4300	0102.7	015.0	128.1	004.4334	0157.8	049.2	53.89
333.0	000.4300	0102.6	015.0	127.9	004.4871	0157.7	049.3	53.90
334.0	000.4300	0102.5	014.9	127.6	004.5401	0157.6	049.4	53.90
335.0	000.4300	0102.4	014.9	127.3	004.5931	0157.5	049.6	53.90
336.0	000.4300	0102.6	014.9	127.0	004.6474	0157.4	049.7	53.90
337.0	000.4300	0102.7	015.0	126.8	004.7010	0157.4	049.8	53.90
338.0	000.4300	0102.9	015.0	126.5	004.7549	0157.3	049.9	53.90
339.0	000.4300	0103.1	015.0	126.2	004.8095	0157.2	050.0	53.90
340.0	000.4300	0103.3	015.0	126.0	004.8627	0157.1	050.2	53.89
341.0	000.4300	0103.5	015.0	125.7	004.9147	0157.0	050.3	53.88
342.0	000.4300	0103.7	015.0	125.5	004.9677	0157.0	050.4	53.87
343.0	000.4300	0103.9	015.1	125.2	005.0196	0156.9	050.6	53.86
344.0	000.4300	0104.0	015.1	125.0	005.0700	0156.9	050.7	53.84
345.0	000.4300	0104.2	015.1	124.7	005.1206	0156.8	050.9	53.82
346.0	000.4300	0104.4	015.1	124.5	005.1702	0156.8	051.0	53.80
347.0	000.4300	0104.5	015.1	124.3	005.2180	0156.7	051.2	53.77
348.0	000.4300	0104.5	015.1	124.1	005.2633	0156.7	051.4	53.74

Exhibit 18.5

Contour Protection Study Toward WQAC(FM) - Alma, MI

The Country King, Incorporated

FMCommander Single Allocation Study - 01-19-2012 - USGS 03 SEC
WKMM.P's Overlaps (In= 18.47 km, Out= 1.97 km)

WKMM.P CH 214 C3 DA
Lat= 43 57 17.0, Lng= 84 32 59.0
10.0 kW 129.6 M HAAT, 382 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WQAC CH 215 A BLED19930402KA
Lat= 43 22 46.0, Lng= 84 40 25.0
0.1 kW 20 M HAAT, 250 M COR
Prot.= 60 dBu, Intef.= 54 dBu

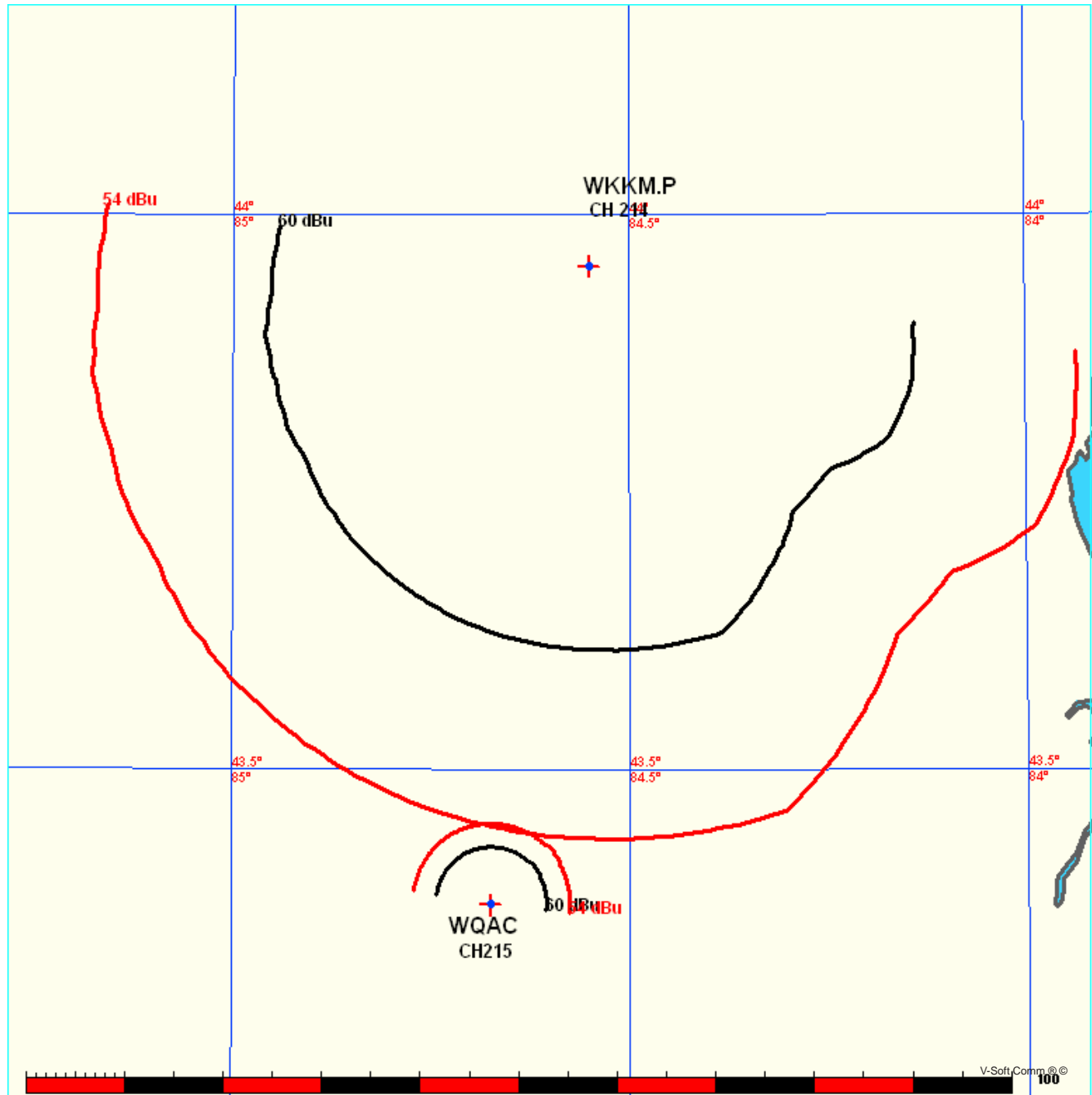


Exhibit 18.5

Contour Protection Study Toward WQAC(FM) - Alma, MI

01-19-2012

Terrain Data: USGS 03 SEC

FMOver Analysis

WKKM.P

WQAC BLED19930402KA

Channel = 214C3
Max ERP = 10 kW
RCAMSL = 382 M
N. Lat. 43 57 17.0
W. Lng. 84 32 59.0
Protected
60 dBu

Channel = 215A
Max ERP = 0.1 kW
RCAMSL = 250 M
N. Lat. 43 22 46.0
W. Lng. 84 40 25.0
Interfering
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
146.0	005.4379	0161.1	034.5	039.5	000.1000	0027.4	045.9	26.88	
147.0	005.6844	0160.9	034.9	039.7	000.1000	0027.4	045.2	27.05	
148.0	005.9363	0160.7	035.2	039.8	000.1000	0027.4	044.5	27.23	
149.0	006.1937	0160.4	035.5	040.0	000.1000	0027.5	043.8	27.41	
150.0	006.4565	0160.2	035.8	040.1	000.1000	0027.5	043.1	27.60	
151.0	006.7761	0160.0	036.2	040.3	000.1000	0027.6	042.4	27.81	
152.0	007.1035	0159.8	036.6	040.5	000.1000	0027.7	041.7	28.02	
153.0	007.4385	0159.6	036.9	040.6	000.1000	0027.8	040.9	28.24	
154.0	007.7813	0159.4	037.3	040.7	000.1000	0027.8	040.2	28.46	
155.0	008.1318	0159.3	037.6	040.8	000.1000	0027.9	039.5	28.70	
156.0	008.4900	0159.1	038.0	040.8	000.1000	0027.9	038.7	28.94	
157.0	008.8559	0158.9	038.3	040.8	000.1000	0027.9	038.0	29.18	
158.0	009.2295	0158.9	038.6	040.9	000.1000	0027.9	037.2	29.44	
159.0	009.6109	0158.7	038.9	040.8	000.1000	0027.9	036.5	29.70	
160.0	010.0000	0158.4	039.2	040.7	000.1000	0027.8	035.8	29.96	
161.0	010.0000	0158.0	039.2	040.1	000.1000	0027.5	035.2	30.16	
162.0	010.0000	0157.6	039.1	039.5	000.1000	0027.4	034.6	30.37	
163.0	010.0000	0157.3	039.1	038.8	000.1000	0027.2	034.1	30.57	
164.0	010.0000	0157.0	039.1	038.1	000.1000	0027.0	033.5	30.77	
165.0	010.0000	0156.7	039.0	037.3	000.1000	0026.8	033.0	30.97	
166.0	010.0000	0156.3	039.0	036.5	000.1000	0026.7	032.5	31.16	
167.0	010.0000	0156.0	039.0	035.7	000.1000	0027.0	032.0	31.36	
168.0	010.0000	0155.6	038.9	034.8	000.1000	0027.3	031.6	31.55	
169.0	010.0000	0155.3	038.9	033.9	000.1000	0027.7	031.1	31.74	
170.0	010.0000	0155.0	038.8	033.0	000.1000	0028.2	030.6	31.95	
171.0	010.0000	0154.8	038.8	032.0	000.1000	0028.3	030.2	32.15	
172.0	010.0000	0154.6	038.8	031.0	000.1000	0028.2	029.8	32.35	
173.0	010.0000	0154.3	038.8	029.9	000.1000	0027.9	029.4	32.55	
174.0	010.0000	0154.0	038.7	028.8	000.1000	0027.6	029.0	32.74	
175.0	010.0000	0153.8	038.7	027.7	000.1000	0027.1	028.7	32.93	
176.0	010.0000	0153.5	038.7	026.5	000.1000	0026.6	028.4	33.11	
177.0	010.0000	0153.0	038.6	025.3	000.1000	0026.0	028.1	33.26	
178.0	010.0000	0152.8	038.6	024.0	000.1000	0025.4	027.8	33.42	
179.0	010.0000	0152.6	038.6	022.7	000.1000	0024.8	027.5	33.57	

Exhibit 18.5

Contour Protection Study Toward WQAC(FM) - Alma, MI

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
180.0	010.0000	0152.3	038.5	021.4	000.1000	0024.2	027.3	33.71
181.0	010.0000	0152.2	038.5	020.1	000.1000	0023.5	027.1	33.84
182.0	010.0000	0151.9	038.5	018.7	000.1000	0023.0	026.9	33.95
183.0	010.0000	0151.7	038.5	017.3	000.1000	0022.7	026.8	34.04
184.0	010.0000	0151.4	038.4	015.9	000.1000	0022.4	026.6	34.12
185.0	010.0000	0151.2	038.4	014.5	000.1000	0022.0	026.5	34.17
186.0	010.0000	0151.0	038.4	013.1	000.1000	0021.1	026.5	34.22
187.0	010.0000	0150.7	038.3	011.6	000.1000	0020.1	026.4	34.24
188.0	010.0000	0150.5	038.3	010.2	000.1000	0019.0	026.4	34.25
189.0	010.0000	0150.2	038.3	008.7	000.1000	0018.0	026.4	34.24
190.0	010.0000	0150.0	038.2	007.3	000.1000	0017.5	026.5	34.21
191.0	010.0000	0149.7	038.2	005.9	000.1000	0017.0	026.6	34.16
192.0	010.0000	0149.5	038.2	004.5	000.1000	0016.3	026.7	34.10
193.0	010.0000	0149.3	038.2	003.1	000.1000	0015.8	026.8	34.02
194.0	010.0000	0149.1	038.1	001.7	000.1000	0015.7	026.9	33.93
195.0	010.0000	0148.7	038.1	000.3	000.1000	0015.8	027.1	33.81
196.0	010.0000	0148.4	038.1	359.0	000.1000	0015.8	027.3	33.68
197.0	010.0000	0148.1	038.0	357.7	000.1000	0015.9	027.6	33.54
198.0	010.0000	0147.9	038.0	356.5	000.1000	0017.0	027.8	33.39
199.0	010.0000	0147.5	037.9	355.3	000.1000	0016.9	028.1	33.22
200.0	010.0000	0146.9	037.9	354.1	000.1000	0016.9	028.5	33.03
201.0	010.0000	0146.5	037.8	353.0	000.1000	0017.0	028.8	32.85
202.0	010.0000	0146.1	037.8	351.9	000.1000	0016.6	029.2	32.66
203.0	010.0000	0145.7	037.7	350.9	000.1000	0016.2	029.6	32.46
204.0	010.0000	0145.2	037.7	349.9	000.1000	0016.2	030.0	32.26
205.0	010.0000	0144.8	037.6	348.9	000.1000	0016.2	030.4	32.06
206.0	010.0000	0144.5	037.6	348.0	000.1000	0016.1	030.8	31.86
207.0	010.0000	0144.1	037.5	347.1	000.1000	0016.2	031.3	31.66
208.0	010.0000	0143.7	037.5	346.2	000.1000	0016.2	031.7	31.47
209.0	010.0000	0143.1	037.4	345.5	000.1000	0016.0	032.2	31.27
210.0	010.0000	0142.6	037.4	344.7	000.1000	0016.0	032.7	31.08
211.0	010.0000	0142.0	037.3	344.0	000.1000	0015.8	033.3	30.88
212.0	010.0000	0141.5	037.2	343.4	000.1000	0015.8	033.8	30.69
213.0	010.0000	0141.0	037.2	342.7	000.1000	0015.7	034.3	30.49
214.0	010.0000	0140.7	037.1	342.1	000.1000	0015.5	034.8	30.29
215.0	010.0000	0139.7	037.0	341.6	000.1000	0015.4	035.4	30.08
216.0	010.0000	0138.8	036.9	341.2	000.1000	0015.2	036.0	29.87
217.0	010.0000	0137.7	036.8	340.8	000.1000	0015.0	036.6	29.66
218.0	010.0000	0137.5	036.8	340.3	000.1000	0014.7	037.2	29.47
219.0	010.0000	0137.4	036.7	339.8	000.1000	0014.4	037.7	29.28
220.0	010.0000	0137.0	036.7	339.4	000.1000	0014.2	038.3	29.08
221.0	010.0000	0136.4	036.6	339.0	000.1000	0013.9	038.9	28.88
222.0	010.0000	0135.6	036.5	338.7	000.1000	0013.7	039.5	28.69
223.0	010.0000	0134.9	036.4	338.4	000.1000	0013.6	040.1	28.49
224.0	010.0000	0134.1	036.4	338.2	000.1000	0013.4	040.7	28.30
225.0	010.0000	0133.2	036.2	338.0	000.1000	0013.3	041.4	28.11

MUNN-REESE, INC.

Broadcast Engineering Consultants

COLDWATER, MI 49036

Exhibit 18.5

Contour Protection Study Toward WQAC(FM) - Alma, MI

01-19-2012

Terrain Data: USGS 03 SEC

FMOver Analysis

WQAC BLED19930402KA

WKKM.P

Channel = 215A

Max ERP = 0.1 kW

RCAMSL = 250 M

N. Lat. 43 22 46.0

W. Lng. 84 40 25.0

Protected

60 dBu

Channel = 214C3

Max ERP = 10 kW

RCAMSL = 382 M

N. Lat. 43 57 17.0

W. Lng. 84 32 59.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
324.0	000.1000	0009.6	005.6	192.6	010.0000	0149.4	060.9	52.59	
325.0	000.1000	0009.8	005.6	192.6	010.0000	0149.4	060.8	52.62	
326.0	000.1000	0010.1	005.6	192.5	010.0000	0149.5	060.7	52.65	
327.0	000.1000	0010.5	005.6	192.5	010.0000	0149.5	060.6	52.67	
328.0	000.1000	0010.9	005.6	192.4	010.0000	0149.5	060.6	52.70	
329.0	000.1000	0011.3	005.6	192.3	010.0000	0149.5	060.5	52.72	
330.0	000.1000	0011.7	005.6	192.3	010.0000	0149.5	060.4	52.75	
331.0	000.1000	0011.9	005.6	192.2	010.0000	0149.5	060.4	52.77	
332.0	000.1000	0012.2	005.6	192.1	010.0000	0149.5	060.3	52.79	
333.0	000.1000	0012.6	005.6	192.0	010.0000	0149.5	060.2	52.82	
334.0	000.1000	0012.7	005.6	192.0	010.0000	0149.5	060.2	52.84	
335.0	000.1000	0013.0	005.6	191.9	010.0000	0149.6	060.1	52.86	
336.0	000.1000	0012.9	005.6	191.8	010.0000	0149.6	060.1	52.88	
337.0	000.1000	0013.0	005.6	191.7	010.0000	0149.6	060.0	52.90	
338.0	000.1000	0013.3	005.6	191.7	010.0000	0149.6	060.0	52.93	
339.0	000.1000	0013.9	005.6	191.6	010.0000	0149.6	059.9	52.95	
340.0	000.1000	0014.6	005.6	191.5	010.0000	0149.6	059.9	52.97	
341.0	000.1000	0015.1	005.6	191.4	010.0000	0149.6	059.8	52.98	
342.0	000.1000	0015.5	005.6	191.3	010.0000	0149.6	059.8	53.00	
343.0	000.1000	0015.7	005.6	191.3	010.0000	0149.6	059.7	53.02	
344.0	000.1000	0015.8	005.6	191.2	010.0000	0149.7	059.7	53.04	
345.0	000.1000	0016.0	005.6	191.1	010.0000	0149.7	059.6	53.05	
346.0	000.1000	0016.2	005.6	191.0	010.0000	0149.7	059.6	53.07	
347.0	000.1000	0016.2	005.6	190.9	010.0000	0149.7	059.5	53.08	
348.0	000.1000	0016.1	005.6	190.8	010.0000	0149.7	059.5	53.10	
349.0	000.1000	0016.2	005.6	190.7	010.0000	0149.7	059.5	53.11	
350.0	000.1000	0016.2	005.6	190.7	010.0000	0149.7	059.4	53.13	
351.0	000.1000	0016.2	005.6	190.6	010.0000	0149.7	059.4	53.14	
352.0	000.1000	0016.7	005.6	190.5	010.0000	0149.7	059.4	53.15	
353.0	000.1000	0017.0	005.6	190.4	010.0000	0149.8	059.3	53.16	
354.0	000.1000	0016.9	005.6	190.3	010.0000	0149.8	059.3	53.18	
355.0	000.1000	0016.9	005.6	190.2	010.0000	0149.9	059.3	53.19	
356.0	000.1000	0017.1	005.6	190.1	010.0000	0149.9	059.2	53.20	

MUNN-REESE, INC.

Broadcast Engineering Consultants

COLDWATER, MI 49036

Exhibit 18.5

Contour Protection Study Toward WQAC(FM) - Alma, MI

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
357.0	000.1000	0016.5	005.6	190.0	010.0000	0149.9	059.2	53.21
358.0	000.1000	0015.7	005.6	189.9	010.0000	0150.0	059.2	53.22
359.0	000.1000	0015.8	005.6	189.8	010.0000	0150.0	059.2	53.23
000.0	000.1000	0015.9	005.6	189.7	010.0000	0150.0	059.2	53.23
001.0	000.1000	0015.9	005.6	189.6	010.0000	0150.0	059.1	53.24
002.0	000.1000	0015.7	005.6	189.5	010.0000	0150.0	059.1	53.25
003.0	000.1000	0015.7	005.6	189.5	010.0000	0150.1	059.1	53.25
004.0	000.1000	0016.1	005.6	189.4	010.0000	0150.1	059.1	53.26
005.0	000.1000	0016.5	005.6	189.3	010.0000	0150.1	059.1	53.26
006.0	000.1000	0017.0	005.6	189.2	010.0000	0150.2	059.1	53.27
007.0	000.1000	0017.4	005.6	189.1	010.0000	0150.2	059.1	53.27
008.0	000.1000	0017.7	005.6	189.0	010.0000	0150.2	059.1	53.27
009.0	000.1000	0018.2	005.6	188.9	010.0000	0150.2	059.1	53.27
010.0	000.1000	0018.9	005.6	188.8	010.0000	0150.3	059.1	53.27
011.0	000.1000	0019.6	005.6	188.7	010.0000	0150.3	059.1	53.27
012.0	000.1000	0020.4	005.6	188.6	010.0000	0150.3	059.1	53.27
013.0	000.1000	0021.0	005.6	188.5	010.0000	0150.3	059.1	53.27
014.0	000.1000	0021.7	005.6	188.4	010.0000	0150.3	059.1	53.27
015.0	000.1000	0022.1	005.6	188.3	010.0000	0150.3	059.1	53.27
016.0	000.1000	0022.4	005.6	188.2	010.0000	0150.4	059.1	53.26
017.0	000.1000	0022.6	005.6	188.1	010.0000	0150.4	059.2	53.26
018.0	000.1000	0022.8	005.6	188.0	010.0000	0150.5	059.2	53.26
019.0	000.1000	0023.1	005.6	187.9	010.0000	0150.5	059.2	53.25
020.0	000.1000	0023.4	005.6	187.8	010.0000	0150.5	059.2	53.25
021.0	000.1000	0024.0	005.6	187.7	010.0000	0150.6	059.2	53.24
022.0	000.1000	0024.5	005.6	187.7	010.0000	0150.6	059.3	53.23
023.0	000.1000	0024.9	005.6	187.6	010.0000	0150.6	059.3	53.22
024.0	000.1000	0025.4	005.6	187.5	010.0000	0150.6	059.3	53.22
025.0	000.1000	0025.9	005.6	187.4	010.0000	0150.7	059.3	53.21
026.0	000.1000	0026.3	005.6	187.3	010.0000	0150.7	059.4	53.20
027.0	000.1000	0026.8	005.6	187.2	010.0000	0150.7	059.4	53.19
028.0	000.1000	0027.2	005.6	187.1	010.0000	0150.7	059.4	53.17
029.0	000.1000	0027.6	005.6	187.0	010.0000	0150.7	059.5	53.16
030.0	000.1000	0028.0	005.6	186.9	010.0000	0150.8	059.5	53.15
031.0	000.1000	0028.2	005.6	186.8	010.0000	0150.8	059.5	53.14
032.0	000.1000	0028.3	005.6	186.8	010.0000	0150.8	059.6	53.12
033.0	000.1000	0028.2	005.6	186.7	010.0000	0150.8	059.6	53.11
034.0	000.1000	0027.7	005.6	186.6	010.0000	0150.8	059.7	53.09
035.0	000.1000	0027.2	005.6	186.5	010.0000	0150.9	059.7	53.08
036.0	000.1000	0026.9	005.6	186.4	010.0000	0150.9	059.8	53.06
037.0	000.1000	0026.8	005.6	186.3	010.0000	0150.9	059.8	53.04
038.0	000.1000	0027.0	005.6	186.3	010.0000	0150.9	059.9	53.03
039.0	000.1000	0027.3	005.6	186.2	010.0000	0150.9	059.9	53.01
040.0	000.1000	0027.5	005.6	186.1	010.0000	0150.9	060.0	52.99
041.0	000.1000	0027.9	005.6	186.0	010.0000	0151.0	060.0	52.97
042.0	000.1000	0028.5	005.6	185.9	010.0000	0151.0	060.1	52.95
043.0	000.1000	0029.8	005.6	185.9	010.0000	0151.0	060.1	52.93

Exhibit 18.6

Contour Protection Study Toward WPHN(FM) - Gaylord, MI

The Country King, Incorporated

FMCommander Single Allocation Study - 01-19-2012 - USGS 03 SEC
WKMM.P's Overlaps (In= 2.86 km, Out= 20.37 km)

WKMM.P CH 214 C3 DA
Lat= 43 57 17.0, Lng= 84 32 59.0
10.0 kW 129.6 M HAAT, 382 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WPHN CH 213 C BLED19850419LP
Lat= 45 08 17.0, Lng= 84 09 44.0
100.0 kW 305 M HAAT, 579 M COR
Prot.= 60 dBu, Intef.= 54 dBu

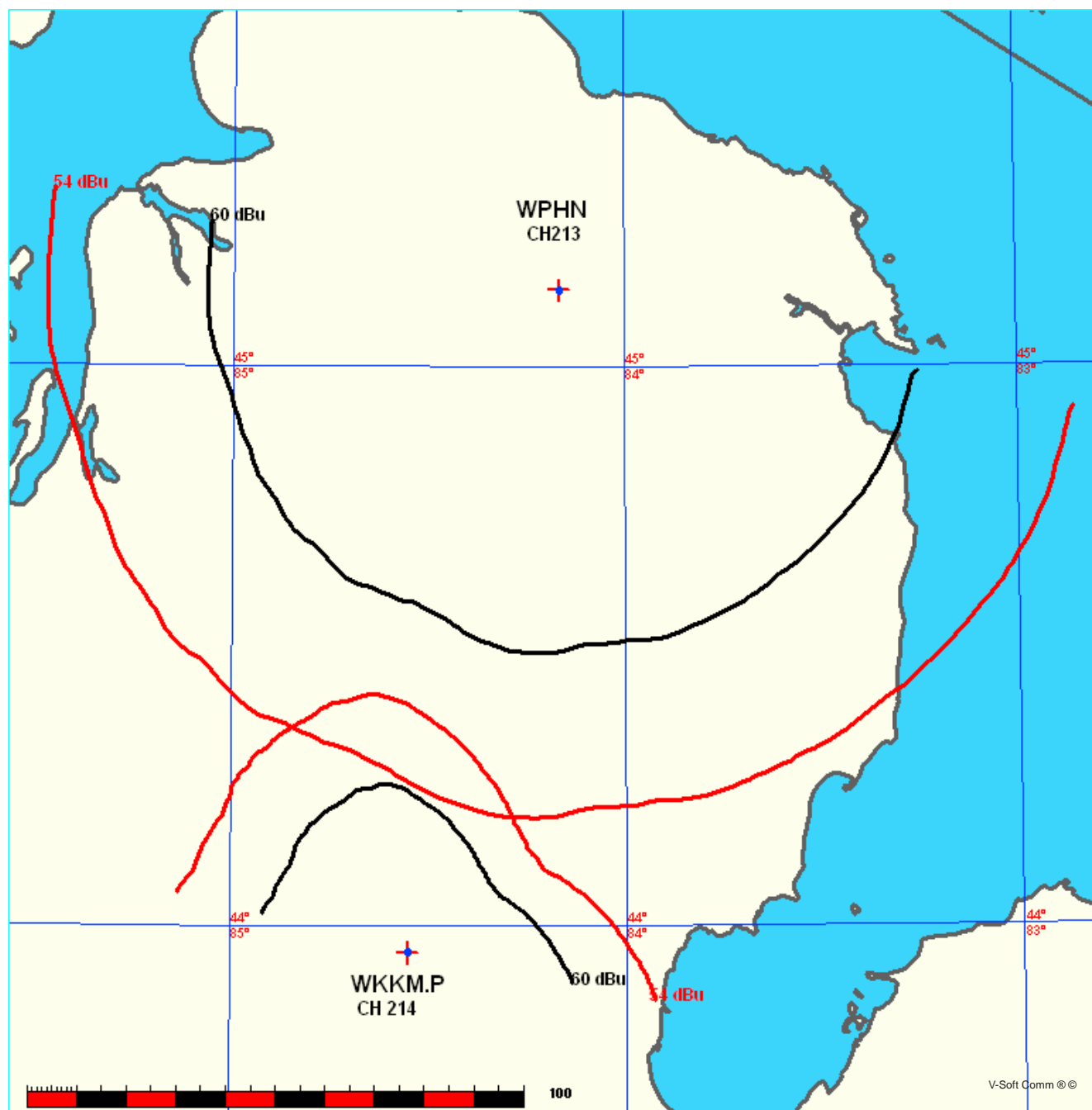


Exhibit 18.6

Contour Protection Study Toward WPHN(FM) - Gaylord, MI

01-19-2012

Terrain Data: USGS 03 SEC

FMOver Analysis

WKMM.P

WPHN BLED19850419LP

Channel = 214C3

Max ERP = 10 kW

RCAMSL = 382 M

N. Lat. 43 57 17.0

W. Lng. 84 32 59.0

Protected

60 dBu

Channel = 213C

Max ERP = 100 kW

RCAMSL = 579 M

N. Lat. 45 08 17.0

W. Lng. 84 09 44.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
330.0	010.0000	0103.9	032.5	204.6	100.0000	0259.9	113.5	50.61	
331.0	010.0000	0103.5	032.4	204.4	100.0000	0260.0	113.1	50.71	
332.0	010.0000	0103.7	032.4	204.2	100.0000	0259.9	112.6	50.82	
333.0	010.0000	0104.0	032.5	204.0	100.0000	0259.9	112.2	50.94	
334.0	010.0000	0104.6	032.6	203.9	100.0000	0259.8	111.7	51.06	
335.0	010.0000	0104.7	032.6	203.7	100.0000	0259.9	111.2	51.17	
336.0	010.0000	0104.7	032.6	203.5	100.0000	0260.2	110.8	51.28	
337.0	010.0000	0105.1	032.7	203.3	100.0000	0260.6	110.4	51.41	
338.0	010.0000	0106.8	032.9	203.2	100.0000	0260.7	109.8	51.57	
339.0	010.0000	0108.2	033.1	203.1	100.0000	0261.0	109.2	51.72	
340.0	010.0000	0109.3	033.3	202.9	100.0000	0261.4	108.7	51.86	
341.0	010.0000	0110.3	033.4	202.7	100.0000	0261.8	108.2	52.01	
342.0	010.0000	0111.2	033.6	202.5	100.0000	0262.5	107.7	52.16	
343.0	010.0000	0111.1	033.5	202.3	100.0000	0263.0	107.4	52.28	
344.0	010.0000	0110.6	033.5	202.0	100.0000	0263.4	107.1	52.37	
345.0	010.0000	0110.0	033.4	201.7	100.0000	0263.5	106.8	52.45	
346.0	010.0000	0109.6	033.3	201.5	100.0000	0263.6	106.5	52.54	
347.0	010.0000	0109.3	033.3	201.2	100.0000	0263.7	106.2	52.63	
348.0	010.0000	0109.6	033.3	200.9	100.0000	0263.5	105.8	52.72	
349.0	010.0000	0110.2	033.4	200.7	100.0000	0263.4	105.4	52.83	
350.0	010.0000	0111.2	033.5	200.5	100.0000	0263.5	105.0	52.95	
351.0	009.7837	0112.8	033.6	200.2	100.0000	0263.9	104.7	53.06	
352.0	009.5697	0114.1	033.6	199.9	100.0000	0265.0	104.4	53.17	
353.0	009.3581	0114.9	033.5	199.6	100.0000	0266.0	104.2	53.26	
354.0	009.1489	0115.0	033.4	199.3	100.0000	0267.3	104.1	53.33	
355.0	008.9421	0114.4	033.1	198.9	100.0000	0269.5	104.1	53.40	
356.0	008.7376	0113.7	032.8	198.6	100.0000	0271.3	104.1	53.44	
357.0	008.5355	0113.1	032.6	198.2	100.0000	0272.8	104.2	53.47	
358.0	008.3357	0113.0	032.4	197.9	100.0000	0273.9	104.2	53.51	
359.0	008.1383	0112.0	032.0	197.5	100.0000	0275.2	104.3	53.51	
000.0	007.9433	0111.2	031.7	197.2	100.0000	0276.6	104.4	53.52	
001.0	007.6199	0110.5	031.3	196.8	100.0000	0278.1	104.6	53.49	
002.0	007.3032	0110.3	031.0	196.5	100.0000	0279.4	104.8	53.47	
003.0	006.9933	0110.0	030.6	196.2	100.0000	0280.6	105.0	53.45	

MUNN-REESE, INC.

Broadcast Engineering Consultants
COLDWATER, MI 49036

Exhibit 18.6

Contour Protection Study Toward WPHN(FM) - Gaylord, MI

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
004.0	006.6901	0110.4	030.4	195.9	100.0000	0281.8	105.2	53.44
005.0	006.3936	0110.5	030.1	195.5	100.0000	0283.2	105.4	53.42
006.0	006.1038	0110.7	029.8	195.2	100.0000	0284.2	105.6	53.39
007.0	005.8207	0111.3	029.5	194.9	100.0000	0285.2	105.8	53.37
008.0	005.5444	0112.1	029.3	194.6	100.0000	0286.1	105.9	53.35
009.0	005.2748	0112.9	029.1	194.4	100.0000	0287.0	106.1	53.32
010.0	005.0119	0113.5	028.8	194.1	100.0000	0287.7	106.3	53.27
011.0	004.8078	0113.8	028.6	193.8	100.0000	0288.7	106.5	53.24
012.0	004.6080	0114.0	028.3	193.5	100.0000	0289.6	106.8	53.20
013.0	004.4125	0114.9	028.1	193.3	100.0000	0290.2	107.0	53.16
014.0	004.2212	0115.3	027.9	193.0	100.0000	0290.9	107.2	53.11
015.0	004.0341	0115.6	027.6	192.7	100.0000	0291.4	107.5	53.05
016.0	003.8512	0116.9	027.5	192.5	100.0000	0292.1	107.6	53.02
017.0	003.6726	0117.4	027.2	192.2	100.0000	0292.5	107.9	52.95
018.0	003.4983	0117.5	027.0	192.0	100.0000	0292.9	108.2	52.87
019.0	003.3282	0117.2	026.6	191.8	100.0000	0293.3	108.6	52.77
020.0	003.1623	0116.9	026.3	191.6	100.0000	0293.9	109.0	52.68
021.0	003.0335	0116.8	026.0	191.3	100.0000	0294.2	109.3	52.60
022.0	002.9075	0117.3	025.8	191.1	100.0000	0294.6	109.6	52.53
023.0	002.7841	0118.0	025.7	190.9	100.0000	0294.9	109.9	52.47
024.0	002.6634	0118.6	025.5	190.7	100.0000	0295.3	110.2	52.40
025.0	002.5453	0119.2	025.3	190.5	100.0000	0295.8	110.5	52.33
026.0	002.4300	0120.2	025.1	190.3	100.0000	0296.4	110.8	52.27
027.0	002.3173	0121.6	024.9	190.1	100.0000	0297.0	111.0	52.21
028.0	002.2073	0122.2	024.7	189.9	100.0000	0297.5	111.4	52.14
029.0	002.0999	0122.8	024.5	189.8	100.0000	0298.1	111.7	52.06
030.0	001.9953	0123.1	024.2	189.6	100.0000	0298.5	112.1	51.97
031.0	001.9140	0123.5	024.0	189.5	100.0000	0298.8	112.4	51.90
032.0	001.8345	0123.9	023.8	189.3	100.0000	0299.2	112.8	51.82
033.0	001.7566	0124.4	023.7	189.1	100.0000	0299.5	113.1	51.74
034.0	001.6805	0124.7	023.4	189.0	100.0000	0299.6	113.5	51.66
035.0	001.6060	0125.1	023.2	188.9	100.0000	0299.8	113.9	51.57
036.0	001.5332	0125.6	023.0	188.7	100.0000	0300.0	114.2	51.48
037.0	001.4621	0126.2	022.8	188.6	100.0000	0300.2	114.6	51.40
038.0	001.3927	0127.0	022.6	188.5	100.0000	0300.4	115.0	51.32
039.0	001.3250	0128.0	022.4	188.3	100.0000	0300.6	115.3	51.24
040.0	001.2589	0129.0	022.3	188.2	100.0000	0300.7	115.7	51.16
041.0	001.2254	0130.0	022.2	188.1	100.0000	0300.9	115.9	51.10
042.0	001.1923	0131.0	022.1	187.9	100.0000	0301.0	116.2	51.04
043.0	001.1597	0131.5	022.0	187.8	100.0000	0301.2	116.5	50.97
044.0	001.1276	0131.7	021.9	187.7	100.0000	0301.3	116.8	50.90
045.0	001.0958	0132.0	021.8	187.6	100.0000	0301.3	117.2	50.82
046.0	001.0646	0132.6	021.7	187.5	100.0000	0301.4	117.5	50.75
047.0	001.0338	0133.5	021.6	187.4	100.0000	0301.5	117.8	50.69
048.0	001.0034	0133.9	021.5	187.2	100.0000	0301.6	118.1	50.61
049.0	000.9735	0134.4	021.3	187.1	100.0000	0301.6	118.5	50.54
050.0	000.9441	0135.1	021.2	187.1	100.0000	0301.7	118.8	50.47

Exhibit 18.6

Contour Protection Study Toward WPHN(FM) - Gaylord, MI

01-19-2012

Terrain Data: USGS 03 SEC

FMOver Analysis

WPHN BLED19850419LP

WKKM.P

Channel = 213C

Max ERP = 100 kW

RCAMSL = 579 M

N. Lat. 45 08 17.0

W. Lng. 84 09 44.0

Protected

60 dBu

Channel = 214C3

Max ERP = 10 kW

RCAMSL = 382 M

N. Lat. 43 57 17.0

W. Lng. 84 32 59.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
148.0	100.0000	0296.1	072.1	044.2	001.1222	0131.8	098.7	30.85	
149.0	100.0000	0295.7	072.0	043.9	001.1306	0131.7	097.3	31.22	
150.0	100.0000	0294.7	072.0	043.7	001.1382	0131.7	096.1	31.56	
151.0	100.0000	0294.0	071.9	043.4	001.1460	0131.7	095.0	31.91	
152.0	100.0000	0293.4	071.9	043.2	001.1543	0131.6	093.8	32.25	
153.0	100.0000	0293.2	071.8	042.9	001.1625	0131.5	092.6	32.60	
154.0	100.0000	0293.8	071.9	042.7	001.1702	0131.4	091.4	32.96	
155.0	100.0000	0293.9	071.9	042.4	001.1794	0131.3	090.2	33.32	
156.0	100.0000	0294.3	071.9	042.1	001.1887	0131.1	089.1	33.67	
157.0	100.0000	0294.5	072.0	041.8	001.1991	0130.8	087.9	34.02	
158.0	100.0000	0294.5	071.9	041.4	001.2108	0130.4	086.8	34.37	
159.0	100.0000	0294.6	072.0	041.1	001.2229	0130.1	085.7	34.73	
160.0	100.0000	0295.6	072.0	040.7	001.2344	0129.8	084.5	35.08	
161.0	100.0000	0296.6	072.1	040.4	001.2469	0129.4	083.4	35.44	
162.0	100.0000	0297.3	072.2	039.9	001.2623	0128.9	082.3	35.80	
163.0	100.0000	0297.3	072.2	039.5	001.2931	0128.5	081.2	36.19	
164.0	100.0000	0296.4	072.1	038.9	001.3284	0128.0	080.2	36.58	
165.0	100.0000	0295.2	072.0	038.4	001.3673	0127.4	079.3	36.96	
166.0	100.0000	0293.3	071.9	037.7	001.4105	0126.8	078.4	37.34	
167.0	100.0000	0290.3	071.6	037.0	001.4600	0126.2	077.6	37.70	
168.0	100.0000	0287.1	071.3	036.3	001.5125	0125.8	076.8	38.06	
169.0	100.0000	0284.2	071.1	035.5	001.5668	0125.4	076.0	38.42	
170.0	100.0000	0283.7	071.1	034.9	001.6159	0125.1	075.2	38.80	
171.0	100.0000	0283.8	071.1	034.2	001.6656	0124.8	074.3	39.18	
172.0	100.0000	0283.6	071.1	033.5	001.7194	0124.6	073.5	39.55	
173.0	100.0000	0283.2	071.0	032.7	001.7767	0124.2	072.7	39.92	
174.0	100.0000	0282.1	070.9	031.9	001.8392	0123.9	072.0	40.26	
175.0	100.0000	0280.6	070.8	031.1	001.9060	0123.5	071.3	40.60	
176.0	100.0000	0280.3	070.8	030.3	001.9720	0123.2	070.6	40.94	
177.0	100.0000	0281.4	070.9	029.5	002.0479	0123.0	069.9	41.33	
178.0	100.0000	0284.7	071.1	028.8	002.1263	0122.7	069.0	41.75	
179.0	100.0000	0289.3	071.5	028.0	002.2051	0122.2	068.1	42.18	
180.0	100.0000	0294.4	071.9	027.3	002.2888	0121.8	067.1	42.62	

MUNN-REESE, INC.

Broadcast Engineering Consultants

COLDWATER, MI 49036

Exhibit 18.6

Contour Protection Study Toward WPHN(FM) - Gaylord, MI

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
181.0	100.0000	0298.1	072.2	026.4	002.3833	0120.9	066.3	43.01
182.0	100.0000	0299.5	072.3	025.5	002.4915	0119.6	065.7	43.33
183.0	100.0000	0300.3	072.4	024.5	002.6074	0118.9	065.1	43.66
184.0	100.0000	0301.4	072.5	023.5	002.7283	0118.3	064.6	43.99
185.0	100.0000	0302.1	072.5	022.4	002.8560	0117.5	064.1	44.29
186.0	100.0000	0302.0	072.5	021.3	002.9911	0116.8	063.8	44.56
187.0	100.0000	0301.7	072.5	020.2	003.1321	0116.9	063.5	44.86
188.0	100.0000	0300.9	072.5	019.1	003.3091	0117.2	063.3	45.19
189.0	100.0000	0299.6	072.4	018.0	003.5021	0117.5	063.2	45.49
190.0	100.0000	0297.4	072.2	016.8	003.7027	0117.4	063.2	45.73
191.0	100.0000	0294.8	072.0	015.7	003.9084	0116.5	063.2	45.89
192.0	100.0000	0292.9	071.8	014.5	004.1179	0115.4	063.3	46.03
193.0	100.0000	0290.8	071.7	013.4	004.3314	0115.1	063.5	46.19
194.0	100.0000	0287.9	071.4	012.3	004.5479	0114.2	063.7	46.26
195.0	100.0000	0285.0	071.2	011.2	004.7662	0113.8	064.0	46.35
196.0	100.0000	0281.2	070.9	010.1	004.9842	0113.6	064.4	46.40
197.0	100.0000	0277.4	070.5	009.1	005.2512	0113.0	064.9	46.44
198.0	100.0000	0273.5	070.2	008.1	005.5248	0112.2	065.4	46.46
199.0	100.0000	0269.0	069.8	007.1	005.7947	0111.3	066.0	46.43
200.0	100.0000	0264.6	069.5	006.1	006.0618	0110.7	066.6	46.39
201.0	100.0000	0263.5	069.4	005.2	006.3443	0110.5	067.0	46.45
202.0	100.0000	0263.4	069.4	004.2	006.6334	0110.4	067.4	46.53
203.0	100.0000	0261.1	069.2	003.3	006.9079	0110.0	068.0	46.51
204.0	100.0000	0259.9	069.1	002.4	007.1880	0110.1	068.5	46.53
205.0	100.0000	0259.9	069.1	001.4	007.4776	0110.4	069.0	46.57
206.0	100.0000	0260.0	069.1	000.5	007.7674	0110.7	069.4	46.60
207.0	100.0000	0264.6	069.5	359.5	008.0376	0111.6	069.6	46.74
208.0	100.0000	0268.1	069.8	358.5	008.2302	0112.4	070.0	46.79
209.0	100.0000	0268.8	069.8	357.7	008.4040	0113.1	070.5	46.75
210.0	100.0000	0271.1	070.0	356.7	008.5871	0113.3	071.0	46.70
211.0	100.0000	0273.5	070.2	355.8	008.7688	0113.8	071.5	46.67
212.0	100.0000	0274.4	070.3	355.0	008.9364	0114.4	072.2	46.58
213.0	100.0000	0276.2	070.4	354.2	009.1081	0114.9	072.8	46.50
214.0	100.0000	0281.1	070.9	353.3	009.3051	0115.0	073.3	46.45
215.0	100.0000	0288.0	071.4	352.2	009.5177	0114.3	073.7	46.40
216.0	100.0000	0293.0	071.8	351.3	009.7121	0113.2	074.3	46.26
217.0	100.0000	0294.5	071.9	350.6	009.8693	0112.1	075.1	46.04
218.0	100.0000	0294.2	071.9	350.0	010.0000	0111.1	076.0	45.77
219.0	100.0000	0292.7	071.8	349.4	010.0000	0110.6	077.1	45.44
220.0	100.0000	0291.1	071.7	348.9	010.0000	0110.2	078.1	45.12
221.0	100.0000	0289.6	071.6	348.4	010.0000	0109.8	079.2	44.80
222.0	100.0000	0287.2	071.4	348.0	010.0000	0109.6	080.3	44.47
223.0	100.0000	0285.6	071.2	347.6	010.0000	0109.4	081.4	44.15
224.0	100.0000	0284.7	071.2	347.1	010.0000	0109.3	082.4	43.84
225.0	100.0000	0286.4	071.3	346.6	010.0000	0109.3	083.4	43.56
226.0	100.0000	0291.7	071.7	345.9	010.0000	0109.6	084.3	43.33
227.0	100.0000	0295.2	072.0	345.4	010.0000	0109.8	085.2	43.07

Exhibit 18.7

Tabulation of Proposed Directional Antenna Pattern

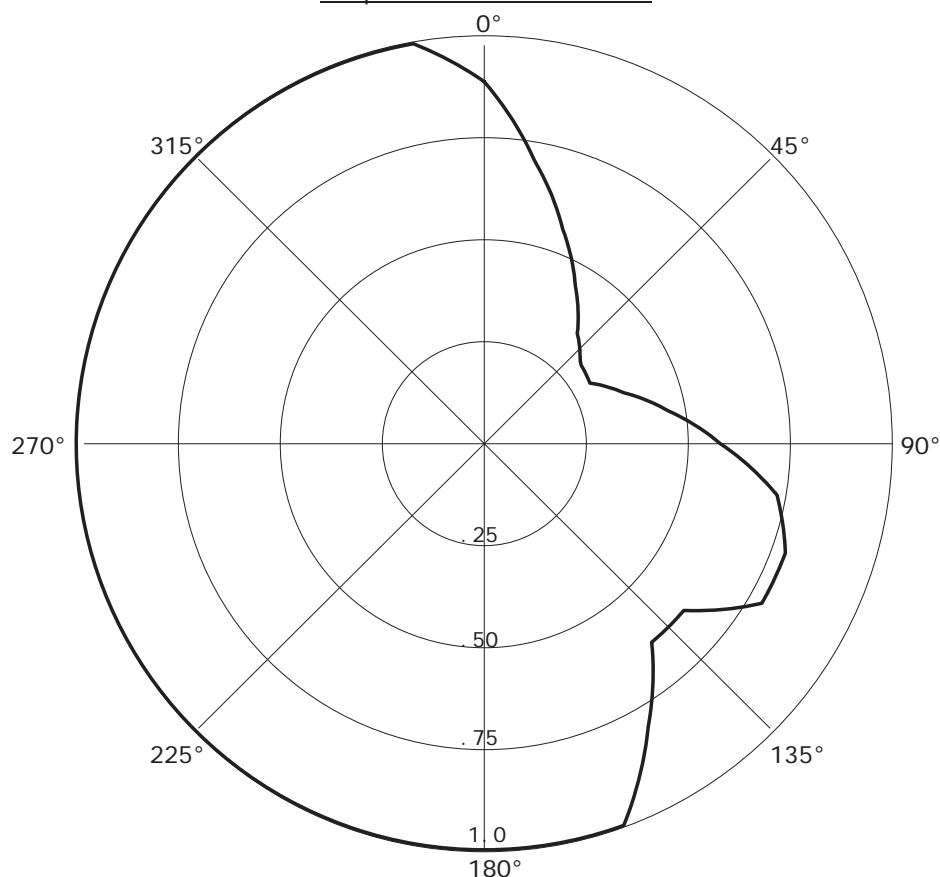
WKMM. P

01-19-2012

RMS(V) = .85

Graph is Relative Field

Azi	Field	dBk	kW
000	0.891	09.000	7.943
010	0.708	07.000	5.012
020	0.562	05.000	3.162
030	0.447	03.000	1.995
040	0.355	01.000	1.259
050	0.307	-00.250	0.944
060	0.299	-00.500	0.891
070	0.365	01.250	1.334
080	0.460	03.250	2.113
090	0.579	05.250	3.350
100	0.729	07.250	5.309
110	0.785	07.900	6.166
120	0.785	07.900	6.166
130	0.638	06.100	4.074
140	0.638	06.100	4.074
150	0.804	08.100	6.457
160	1.000	10.000	10.000
170	1.000	10.000	10.000
180	1.000	10.000	10.000
190	1.000	10.000	10.000
200	1.000	10.000	10.000
210	1.000	10.000	10.000
220	1.000	10.000	10.000
230	1.000	10.000	10.000
240	1.000	10.000	10.000
250	1.000	10.000	10.000
260	1.000	10.000	10.000
270	1.000	10.000	10.000
280	1.000	10.000	10.000
290	1.000	10.000	10.000
300	1.000	10.000	10.000
310	1.000	10.000	10.000
320	1.000	10.000	10.000
330	1.000	10.000	10.000
340	1.000	10.000	10.000
350	1.000	10.000	10.000



The antenna proposed in this application will be mounted in accordance with specific instructions provided by the antenna manufacturer. The antenna will be tested by the manufacturer using the type of mounting which will be employed in the field.

The directional antenna will be mounted on the tower which is of uniform cross section. No other antennas of any type are or will be mounted on the same tower level as the directional antenna.

No antenna is or will be mounted within any vertical or horizontal distance specified by the antenna manufacturer as being necessary for proper operation of the directional antenna. The antenna will be assembled under the supervision of a qualified engineer, who will provide the required certification. This statement will certify that the antenna has been installed pursuant to the manufacturer's instructions. Also upon completion of antenna construction, a statement from a licensed surveyor will be submitted with the application for license certifying the antenna has been installed in the proper orientation.

The directional antenna pattern will be produced by means of parasitic elements adjusted to produce the required pattern.

The antenna pattern will be measured by the manufacturer on the test range, and the measurement results will be supplied to the Commission at the time Form 302-FM is filed covering the construction.