# Exhibit 16.1
# Tabulation of Proposed Non-commercial Allocation

Bible Broadcasting Network, Inc.

REFERENCE CH# 211B - 90.1 MHz, Pwr= 32 kW DA, HAAT= 76.5 M, COR= 359 M DISPLAY DATES
42 08 41.0 N. Average Protected F(50-50)= 37.17 km DATA 07-10-10
85 12 34.0 W. Standard Directional SEARCH 07-12-10

| CH CITY | CALL STATE | TYPE | ANT | AZI <-- | DIST FILE # | LAT LNG | PWR(kW) HAAT(M) | INT(km) COR(M) | PRO(km) LICENSEE | *IN* (Overlap in km) | *OUT* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 211A Coldwater | WYBA MI | LIC | _VX | 149.3<br>329.5 | 26.4<br>BLED20080716AAD | 41 56 24.0<br>85 02 47.0 | 0.250<br>19 | 23.8<br>308 | 7.1<br>Bible Broadcasting Network | -33.5*< | -92.2< |
| 210A Edon | WRRO OH | CP | DCX | 148.2<br>328.5 | 65.8<br>BNPED20071022AXX | 41 38 27.0<br>84 47 32.0 | 3.500<br>80 | 11.2<br>372 | 7.8<br>Club 1915, Inc. | 18.2 | 0.6 |
| 12/10/2008: Accepted on channel 210A by Industry Canada in 11/24/2008 letter as a specially negotiated, short-spaced allotment. Note: no limitation imposed. | | | | | | | | | | | |
| 210A Kalamazoo | WKDS MI | LIC | _CN | 290.3<br>110.0 | 31.9<br>BLED19830204AK | 42 14 36.0<br>85 34 19.0 | 0.140<br>38 | 9.6<br>303 | 6.7<br>Kalamazoo Public Schools | 5.7 | 0.7 |
| SPECIAL NEGOTIATED SHORT-SPACED ALLOTMENT | | | | | | | | | | | |
| 212B Fort Wayne | WBCL IN | LIC | _CX | 179.4<br>359.5 | 115.6<br>BLED20040528AHQ | 41 06 13.0<br>85 11 46.0 | 26.000<br>211 | 75.8<br>457 | 51.4<br>Taylor University Broadcas | 1.1 | 3.6 |
| 209A Olivet | WOCR MI | LIC | _CN | 35.2<br>215.4 | 40.5<br>BLED19890525KD | 42 26 31.0<br>84 55 30.0 | 0.125<br>23 | 0.8<br>303 | 6.0<br>Board Of Trustees/olivet C | 3.9 | 30.8 |
| 209A Bedford | WSPB MI | APP | DCX | 342.2<br>162.1 | 36.1<br>BMPED20090824ALI | 42 27 12.9<br>85 20 39.0 | 0.750<br>71 | 1.6<br>352 | 15.4<br>Holy Family Oratory Of St. | 7.3 | 17.9 |
| 209A Bedford | WSPB MI | CP | DVX | 342.2<br>162.1 | 36.1<br>BNPED20071022AXL | 42 27 12.9<br>85 20 39.0 | 0.750<br>71 | 1.6<br>352 | 15.4<br>Holy Family Oratory Of St. | 7.3 | 17.9 |
| 5/13/2008: Accepted on channel 209A by Industry Canada in 5/12/2008 letter, not specially negotiated. | | | | | | | | | | | |
| 210A Wakarusa | WYBV IN | LIC | _CX | 214.1<br>33.7 | 91.2<br>BLED20060531AIM | 41 27 50.0<br>85 49 22.0 | 1.750<br>100 | 30.8<br>357 | 20.9<br>Bible Broadcasting Network | 21.8 | 10.3 |
| 209A Howe | WHWE IN | LIC | _CN | 201.0<br>20.9 | 49.9<br>BLED19921208KA | 41 43 32.0<br>85 25 30.0 | 0.100<br>17 | 0.7<br>287 | 5.6<br>Howe Military School | 10.3 | 40.2 |
| 208B1 Schoolcraft | WOFR MI | LIC | DCX | 263.9<br>83.6 | 35.2<br>BLED20021230AAW | 42 06 38.0<br>85 37 57.0 | 10.000<br>42 | 2.3<br>305 | 22.2<br>Family Stations, Inc. | 11.1 | 10.9 |
| 213B East Lansing | WKAR-FM MI | LIC | _EY | 46.2<br>226.7 | 90.1<br>BLED19861204KC | 42 42 08.0<br>84 24 51.0 | 87.000<br>273 | 9.3<br>541 | 68.5<br>Michigan State University | 44.8 | 17.9 |
| Grandfathered at 87. kw @ 273 M | | | | | | | | | | | |
| 211A Clyde Township | WXPZ MI | LIC | DEX | 300.1<br>119.4 | 94.6<br>BLED20080818AAI | 42 33 57.0<br>86 12 26.0 | 1.500<br>74 | 56.5<br>261 | 15.8<br>Larlen Communications Inc. | 20.9 | 19.4 |
| 06-T Chicago | WLFM-LP IL | LI | D_N | 263.0<br>81.4 | 201.8<br>BLTVL20100111AIE | 41 53 56.0<br>87 37 23.0 | 3.000<br>387 | 14.1<br>566 | 3.9<br>Wlfm, Llc | 195.5R | 6.3M |

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 = 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.
"<" = Contour Overlap

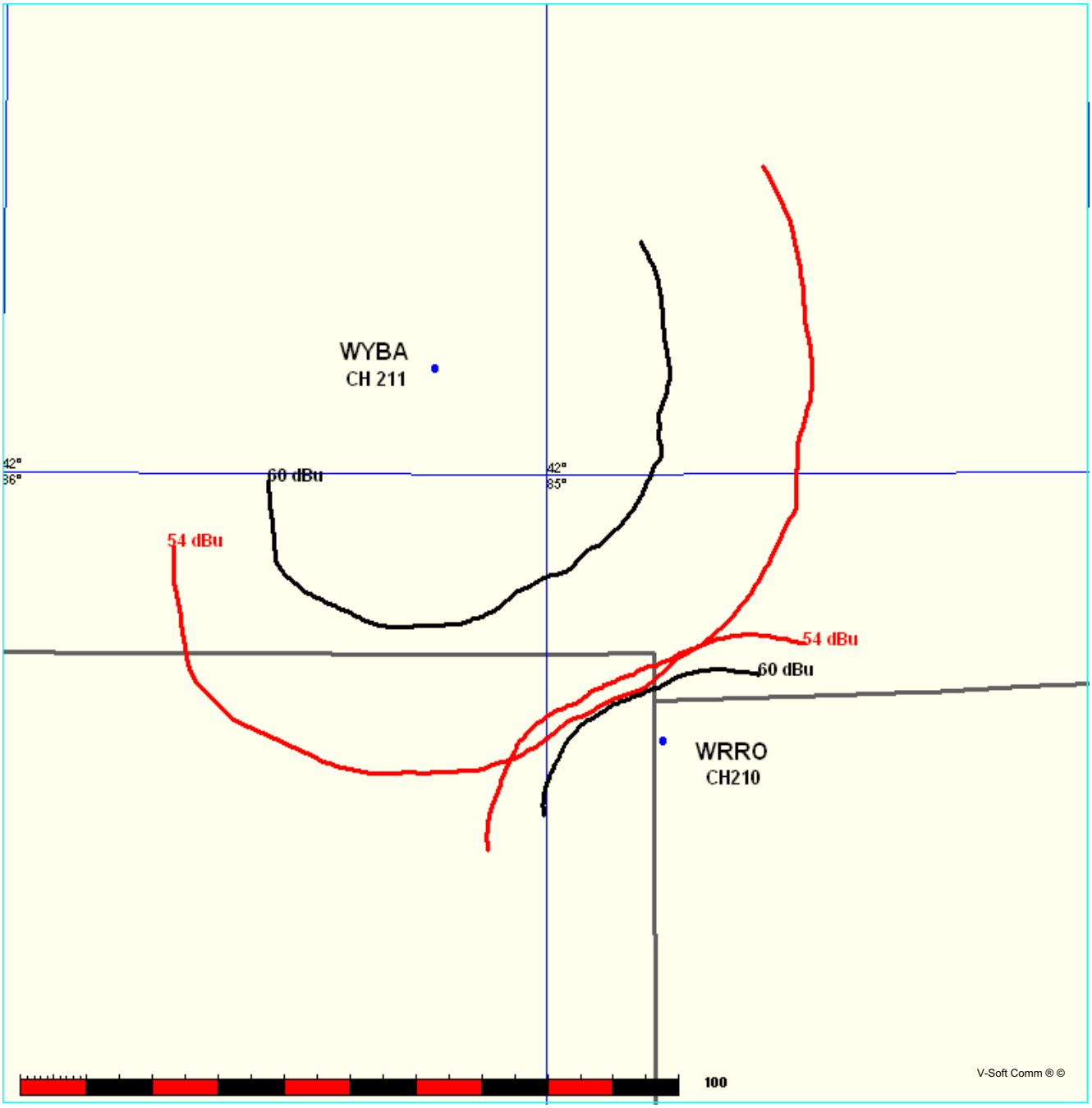
Yellow Highlighted Text denotes individual contour protection studies as included in ***Exhibit(s) 16.1*** to ***16.4***.

# Exhibit 16.2
# Contour Protection Studies Toward WRRO(FM) - Edon, OH

FMCommander Single Allocation Study - 07-13-2010 - USGS 03 SEC
WYBA's Overlaps (In= 18.25 km, Out= 0.59 km)

WYBA CH 211 B DA
Lat= 42 08 41.0, Lng= 85 12 34.0
32.0 kW 76.5 M HAAT, 359 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WRRO CH 210 A DA BNPED20071022AXX
Lat= 41 38 27.0, Lng= 84 47 32.0
3.5 kW 80 M HAAT, 372 M COR
Prot.= 60 dBu, Intef.= 54 dBu




***Munn-Reese, Inc.***
Broadcast Engineering Consultants
Coldwater, MI 49036

# Exhibit 16.2
# Contour Protection Studies Toward WRRO(FM) - Edon, OH

07-13-2010 USGS 03 SEC Terrain Data FMOver Analysis

| | |
|---|---|
| WYBA | WRRO BNPED20071022AXX |
| Channel = 211B | Channel = 210A |
| Max ERP = 32 kW | Max ERP = 3.5 kW |
| RCAMSL = 359 M | RCAMSL = 372 M |
| N. Lat. 42 08 41.0 | N. Lat. 41 38 27.0 |
| W. Lng. 85 12 34.0 | W. Lng. 84 47 32.0 |
| 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) |
|---|---|---|---|---|---|---|---|---|---|
| 105.0 | 032.0000 | 0071.1 | 035.5 | 359.5 | 000.1142 | 0059.0 | 046.8 | 31.74 | |
| 106.0 | 032.0000 | 0071.0 | 035.5 | 359.3 | 000.1133 | 0059.0 | 046.2 | 31.90 | |
| 107.0 | 032.0000 | 0072.2 | 035.7 | 359.4 | 000.1136 | 0059.0 | 045.5 | 32.13 | |
| 108.0 | 032.0000 | 0074.0 | 036.1 | 359.6 | 000.1144 | 0059.0 | 044.8 | 32.41 | |
| 109.0 | 032.0000 | 0075.6 | 036.4 | 359.8 | 000.1150 | 0058.9 | 044.1 | 32.66 | |
| 110.0 | 032.0000 | 0077.1 | 036.8 | 359.9 | 000.1154 | 0058.9 | 043.4 | 32.92 | |
| 111.0 | 032.0000 | 0078.1 | 037.0 | 359.8 | 000.1152 | 0058.9 | 042.7 | 33.15 | |
| 112.0 | 032.0000 | 0077.7 | 036.9 | 359.4 | 000.1136 | 0059.0 | 042.1 | 33.31 | |
| 113.0 | 032.0000 | 0077.1 | 036.8 | 358.9 | 000.1117 | 0058.9 | 041.6 | 33.42 | |
| 114.0 | 032.0000 | 0076.7 | 036.7 | 358.4 | 000.1099 | 0058.8 | 041.1 | 33.54 | |
| 115.0 | 032.0000 | 0076.6 | 036.7 | 358.0 | 000.1083 | 0058.7 | 040.5 | 33.67 | |
| 116.0 | 032.0000 | 0076.6 | 036.7 | 357.6 | 000.1068 | 0058.7 | 039.9 | 33.82 | |
| 117.0 | 032.0000 | 0076.8 | 036.7 | 357.1 | 000.1053 | 0058.7 | 039.4 | 33.98 | |
| 118.0 | 032.0000 | 0076.9 | 036.7 | 356.7 | 000.1037 | 0058.6 | 038.8 | 34.12 | |
| 119.0 | 032.0000 | 0077.0 | 036.7 | 356.2 | 000.1020 | 0058.4 | 038.2 | 34.24 | |
| 120.0 | 032.0000 | 0077.2 | 036.8 | 355.7 | 000.1019 | 0058.1 | 037.7 | 34.41 | |
| 121.0 | 032.0000 | 0077.6 | 036.9 | 355.3 | 000.1033 | 0057.8 | 037.1 | 34.66 | |
| 122.0 | 032.0000 | 0078.0 | 037.0 | 354.8 | 000.1048 | 0057.4 | 036.5 | 34.89 | |
| 123.0 | 032.0000 | 0078.1 | 037.0 | 354.2 | 000.1066 | 0056.6 | 036.0 | 35.07 | |
| 124.0 | 032.0000 | 0077.9 | 036.9 | 353.5 | 000.1088 | 0055.5 | 035.5 | 35.20 | |
| 125.0 | 032.0000 | 0077.9 | 036.9 | 352.8 | 000.1109 | 0054.7 | 035.1 | 35.35 | |
| 126.0 | 032.0000 | 0078.0 | 036.9 | 352.1 | 000.1131 | 0054.4 | 034.6 | 35.59 | |
| 127.0 | 032.0000 | 0078.0 | 036.9 | 351.3 | 000.1151 | 0054.3 | 034.1 | 35.85 | |
| 128.0 | 032.0000 | 0078.0 | 037.0 | 350.6 | 000.1171 | 0054.3 | 033.7 | 36.11 | |
| 129.0 | 032.0000 | 0078.1 | 037.0 | 349.7 | 000.1183 | 0054.2 | 033.2 | 36.32 | |
| 130.0 | 032.0000 | 0078.2 | 037.0 | 348.9 | 000.1176 | 0054.1 | 032.8 | 36.46 | |
| 131.0 | 031.5282 | 0078.4 | 036.9 | 347.9 | 000.1167 | 0053.9 | 032.5 | 36.54 | |
| 132.0 | 031.0598 | 0078.6 | 036.8 | 346.9 | 000.1159 | 0053.7 | 032.2 | 36.62 | |
| 133.0 | 030.5950 | 0078.9 | 036.8 | 345.9 | 000.1150 | 0053.5 | 031.9 | 36.68 | |
| 134.0 | 030.1336 | 0079.3 | 036.7 | 344.9 | 000.1142 | 0053.3 | 031.6 | 36.76 | |
| 135.0 | 029.6758 | 0079.9 | 036.7 | 343.9 | 000.1135 | 0053.2 | 031.2 | 36.87 | |
| 136.0 | 029.2215 | 0080.2 | 036.7 | 342.8 | 000.1145 | 0053.1 | 031.0 | 37.01 | |
| 137.0 | 028.7707 | 0079.8 | 036.5 | 341.6 | 000.1157 | 0052.7 | 030.9 | 37.03 | |
| 138.0 | 028.3233 | 0079.5 | 036.3 | 340.4 | 000.1169 | 0052.0 | 030.8 | 37.01 | |

# Exhibit 16.2
# Contour Protection Studies Toward WRRO(FM) - Edon, OH

| Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Actual (dBu) |
|---|---|---|---|---|---|---|---|---|
| 139.0 | 027.8795 | 0079.4 | 036.1 | 339.2 | 000.1161 | 0051.2 | 030.7 | 36.88 |
| 140.0 | 027.4392 | 0079.7 | 036.1 | 338.0 | 000.1147 | 0050.9 | 030.6 | 36.85 |
| 141.0 | 027.3208 | 0080.4 | 036.2 | 336.9 | 000.1134 | 0050.8 | 030.3 | 36.93 |
| 142.0 | 027.2027 | 0081.0 | 036.3 | 335.8 | 000.1134 | 0051.0 | 030.1 | 37.08 |
| 143.0 | 027.0848 | 0081.5 | 036.3 | 334.7 | 000.1134 | 0051.1 | 029.8 | 37.22 |
| 144.0 | 026.9672 | 0082.1 | 036.4 | 333.5 | 000.1134 | 0051.6 | 029.7 | 37.40 |
| 145.0 | 026.8498 | 0082.9 | 036.5 | 332.3 | 000.1134 | 0052.1 | 029.4 | 37.60 |
| 146.0 | 026.7327 | 0083.3 | 036.6 | 331.1 | 000.1134 | 0052.7 | 029.3 | 37.76 |
| 147.0 | 026.6158 | 0083.2 | 036.5 | 329.8 | 000.1134 | 0053.4 | 029.3 | 37.87 |
| 148.0 | 026.4992 | 0082.9 | 036.4 | 328.6 | 000.1134 | 0053.9 | 029.4 | 37.92 |
| 149.0 | 026.3828 | 0082.0 | 036.2 | 327.4 | 000.1134 | 0054.4 | 029.6 | 37.87 |
| 150.0 | 026.2668 | 0080.9 | 036.0 | 326.2 | 000.1134 | 0054.7 | 029.9 | 37.78 |
| 151.0 | 026.3828 | 0079.9 | 035.8 | 325.0 | 000.1134 | 0055.1 | 030.1 | 37.71 |
| 152.0 | 026.4992 | 0079.2 | 035.7 | 323.9 | 000.1134 | 0055.4 | 030.3 | 37.66 |
| 153.0 | 026.6158 | 0079.0 | 035.7 | 322.7 | 000.1134 | 0055.7 | 030.4 | 37.65 |
| 154.0 | 026.7327 | 0079.1 | 035.7 | 321.6 | 000.1134 | 0056.0 | 030.5 | 37.66 |
| 155.0 | 026.8498 | 0079.1 | 035.8 | 320.4 | 000.1134 | 0056.4 | 030.6 | 37.66 |
| 156.0 | 026.9672 | 0079.3 | 035.8 | 319.3 | 000.1157 | 0056.5 | 030.7 | 37.70 |
| 157.0 | 027.0848 | 0079.2 | 035.9 | 318.1 | 000.1193 | 0056.6 | 030.9 | 37.78 |
| 158.0 | 027.2027 | 0078.8 | 035.8 | 317.1 | 000.1227 | 0056.7 | 031.2 | 37.78 |
| 159.0 | 027.3208 | 0078.6 | 035.8 | 316.0 | 000.1262 | 0056.8 | 031.4 | 37.80 |
| 160.0 | 027.4392 | 0079.1 | 036.0 | 314.9 | 000.1300 | 0057.0 | 031.5 | 37.90 |
| 161.0 | 027.8795 | 0080.0 | 036.3 | 313.6 | 000.1344 | 0057.5 | 031.5 | 38.12 |
| 162.0 | 028.3233 | 0080.8 | 036.6 | 312.4 | 000.1387 | 0057.7 | 031.6 | 38.26 |
| 163.0 | 028.7707 | 0081.5 | 036.8 | 311.1 | 000.1431 | 0057.6 | 031.7 | 38.33 |
| 164.0 | 029.2215 | 0082.4 | 037.1 | 309.9 | 000.1479 | 0057.7 | 031.8 | 38.44 |
| 165.0 | 029.6758 | 0083.2 | 037.4 | 308.6 | 000.1552 | 0058.0 | 031.9 | 38.63 |
| 166.0 | 030.1336 | 0083.6 | 037.6 | 307.5 | 000.1620 | 0058.6 | 032.2 | 38.79 |
| 167.0 | 030.5950 | 0083.9 | 037.8 | 306.4 | 000.1687 | 0058.9 | 032.5 | 38.88 |
| 168.0 | 031.0598 | 0083.9 | 037.9 | 305.4 | 000.1750 | 0059.0 | 032.8 | 38.90 |
| 169.0 | 031.5282 | 0084.1 | 038.1 | 304.3 | 000.1814 | 0059.0 | 033.2 | 38.90 |
| 170.0 | 032.0000 | 0084.1 | 038.2 | 303.4 | 000.1874 | 0058.9 | 033.6 | 38.87 |
| 171.0 | 032.0000 | 0084.2 | 038.2 | 302.6 | 000.1925 | 0058.8 | 034.0 | 38.76 |
| 172.0 | 032.0000 | 0085.1 | 038.4 | 301.7 | 000.1988 | 0058.5 | 034.4 | 38.69 |
| 173.0 | 032.0000 | 0086.6 | 038.7 | 300.6 | 000.2059 | 0058.0 | 034.8 | 38.63 |
| 174.0 | 032.0000 | 0087.1 | 038.7 | 299.8 | 000.2120 | 0057.5 | 035.3 | 38.49 |
| 175.0 | 032.0000 | 0086.8 | 038.7 | 299.3 | 000.2180 | 0057.1 | 035.9 | 38.32 |
| 176.0 | 032.0000 | 0086.5 | 038.6 | 298.8 | 000.2240 | 0056.8 | 036.5 | 38.15 |
| 177.0 | 032.0000 | 0086.5 | 038.6 | 298.2 | 000.2303 | 0056.6 | 037.0 | 38.01 |
| 178.0 | 032.0000 | 0086.6 | 038.7 | 297.7 | 000.2365 | 0056.2 | 037.6 | 37.85 |
| 179.0 | 032.0000 | 0086.7 | 038.7 | 297.1 | 000.2426 | 0056.0 | 038.2 | 37.70 |
| 180.0 | 032.0000 | 0087.0 | 038.7 | 296.6 | 000.2489 | 0055.8 | 038.8 | 37.56 |
| 181.0 | 032.0000 | 0087.2 | 038.8 | 296.1 | 000.2547 | 0055.7 | 039.4 | 37.42 |
| 182.0 | 032.0000 | 0087.4 | 038.8 | 295.7 | 000.2600 | 0055.6 | 040.0 | 37.27 |
| 183.0 | 032.0000 | 0087.4 | 038.8 | 295.3 | 000.2647 | 0055.6 | 040.6 | 37.11 |
| 184.0 | 032.0000 | 0087.8 | 038.9 | 294.9 | 000.2702 | 0055.5 | 041.2 | 36.98 |
| 185.0 | 032.0000 | 0088.5 | 039.0 | 294.4 | 000.2762 | 0055.6 | 041.8 | 36.86 |

# Exhibit 16.2
# Contour Protection Studies Toward WRRO(FM) - Edon, OH

07-13-2010  USGS 03 SEC Terrain Data

| WRRO BNPED20071022AXX | WYBA |
|---|---|
| Channel = 210A | Channel = 211B |
| Max ERP = 3.5 kW | Max ERP = 32 kW |
| RCAMSL = 372 M | RCAMSL = 359 M |
| N. Lat. 41 38 27.0 | N. Lat. 42 08 41.0 |
| W. Lng. 84 47 32.0 | W. Lng. 85 12 34.0 |
| 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) |
|---|---|---|---|---|---|---|---|---|---|
| 283.0 | 000.4663 | 0061.5 | 011.9 | 156.7 | 027.0438 | 0079.3 | 058.0 | 53.62 | |
| 284.0 | 000.4461 | 0060.9 | 011.8 | 156.4 | 027.0134 | 0079.3 | 058.0 | 53.63 | |
| 285.0 | 000.4263 | 0060.3 | 011.6 | 156.1 | 026.9828 | 0079.3 | 057.9 | 53.65 | |
| 286.0 | 000.4070 | 0059.5 | 011.4 | 155.9 | 026.9509 | 0079.2 | 057.9 | 53.65 | |
| 287.0 | 000.3881 | 0058.7 | 011.2 | 155.6 | 026.9189 | 0079.2 | 057.9 | 53.65 | |
| 288.0 | 000.3697 | 0058.2 | 011.0 | 155.3 | 026.8889 | 0079.2 | 057.8 | 53.65 | |
| 289.0 | 000.3517 | 0057.8 | 010.9 | 155.1 | 026.8595 | 0079.1 | 057.8 | 53.65 | |
| 290.0 | 000.3342 | 0057.4 | 010.7 | 154.8 | 026.8302 | 0079.1 | 057.8 | 53.65 | |
| 291.0 | 000.3205 | 0057.0 | 010.6 | 154.6 | 026.8032 | 0079.1 | 057.8 | 53.66 | |
| 292.0 | 000.3071 | 0056.4 | 010.4 | 154.4 | 026.7748 | 0079.1 | 057.8 | 53.65 | |
| 293.0 | 000.2939 | 0056.1 | 010.3 | 154.1 | 026.7481 | 0079.1 | 057.7 | 53.65 | |
| 294.0 | 000.2811 | 0055.7 | 010.1 | 153.9 | 026.7213 | 0079.1 | 057.7 | 53.65 | |
| 295.0 | 000.2686 | 0055.6 | 010.0 | 153.7 | 026.6963 | 0079.0 | 057.7 | 53.64 | |
| 296.0 | 000.2563 | 0055.7 | 009.9 | 153.5 | 026.6730 | 0079.0 | 057.7 | 53.65 | |
| 297.0 | 000.2443 | 0055.9 | 009.8 | 153.3 | 026.6505 | 0079.0 | 057.7 | 53.65 | |
| 298.0 | 000.2326 | 0056.4 | 009.7 | 153.1 | 026.6292 | 0079.0 | 057.6 | 53.66 | |
| 299.0 | 000.2212 | 0057.0 | 009.6 | 152.9 | 026.6079 | 0079.1 | 057.6 | 53.67 | |
| 300.0 | 000.2101 | 0057.6 | 009.6 | 152.8 | 026.5871 | 0079.1 | 057.6 | 53.68 | |
| 301.0 | 000.2033 | 0058.2 | 009.5 | 152.6 | 026.5686 | 0079.1 | 057.5 | 53.70 | |
| 302.0 | 000.1966 | 0058.6 | 009.5 | 152.4 | 026.5492 | 0079.1 | 057.5 | 53.71 | |
| 303.0 | 000.1900 | 0058.9 | 009.4 | 152.3 | 026.5291 | 0079.1 | 057.4 | 53.72 | |
| 304.0 | 000.1835 | 0059.0 | 009.3 | 152.1 | 026.5082 | 0079.2 | 057.4 | 53.73 | |
| 305.0 | 000.1772 | 0059.0 | 009.3 | 151.9 | 026.4871 | 0079.2 | 057.4 | 53.73 | |
| 306.0 | 000.1709 | 0058.9 | 009.2 | 151.7 | 026.4656 | 0079.3 | 057.4 | 53.73 | |
| 307.0 | 000.1648 | 0058.8 | 009.1 | 151.5 | 026.4439 | 0079.5 | 057.5 | 53.73 | |
| 308.0 | 000.1588 | 0058.4 | 008.9 | 151.3 | 026.4214 | 0079.6 | 057.5 | 53.72 | |
| 309.0 | 000.1529 | 0057.9 | 008.8 | 151.1 | 026.3993 | 0079.8 | 057.6 | 53.71 | |
| 310.0 | 000.1471 | 0057.7 | 008.7 | 151.0 | 026.3783 | 0079.9 | 057.6 | 53.70 | |
| 311.0 | 000.1435 | 0057.6 | 008.6 | 150.8 | 026.3592 | 0080.1 | 057.6 | 53.71 | |
| 312.0 | 000.1400 | 0057.7 | 008.6 | 150.6 | 026.3408 | 0080.2 | 057.6 | 53.72 | |
| 313.0 | 000.1365 | 0057.7 | 008.5 | 150.5 | 026.3224 | 0080.4 | 057.6 | 53.73 | |
| 314.0 | 000.1331 | 0057.3 | 008.4 | 150.3 | 026.3028 | 0080.6 | 057.7 | 53.72 | |
| 315.0 | 000.1297 | 0057.0 | 008.4 | 150.1 | 026.2839 | 0080.8 | 057.7 | 53.72 | |

# Exhibit 16.2
# Contour Protection Studies Toward WRRO(FM) - Edon, OH

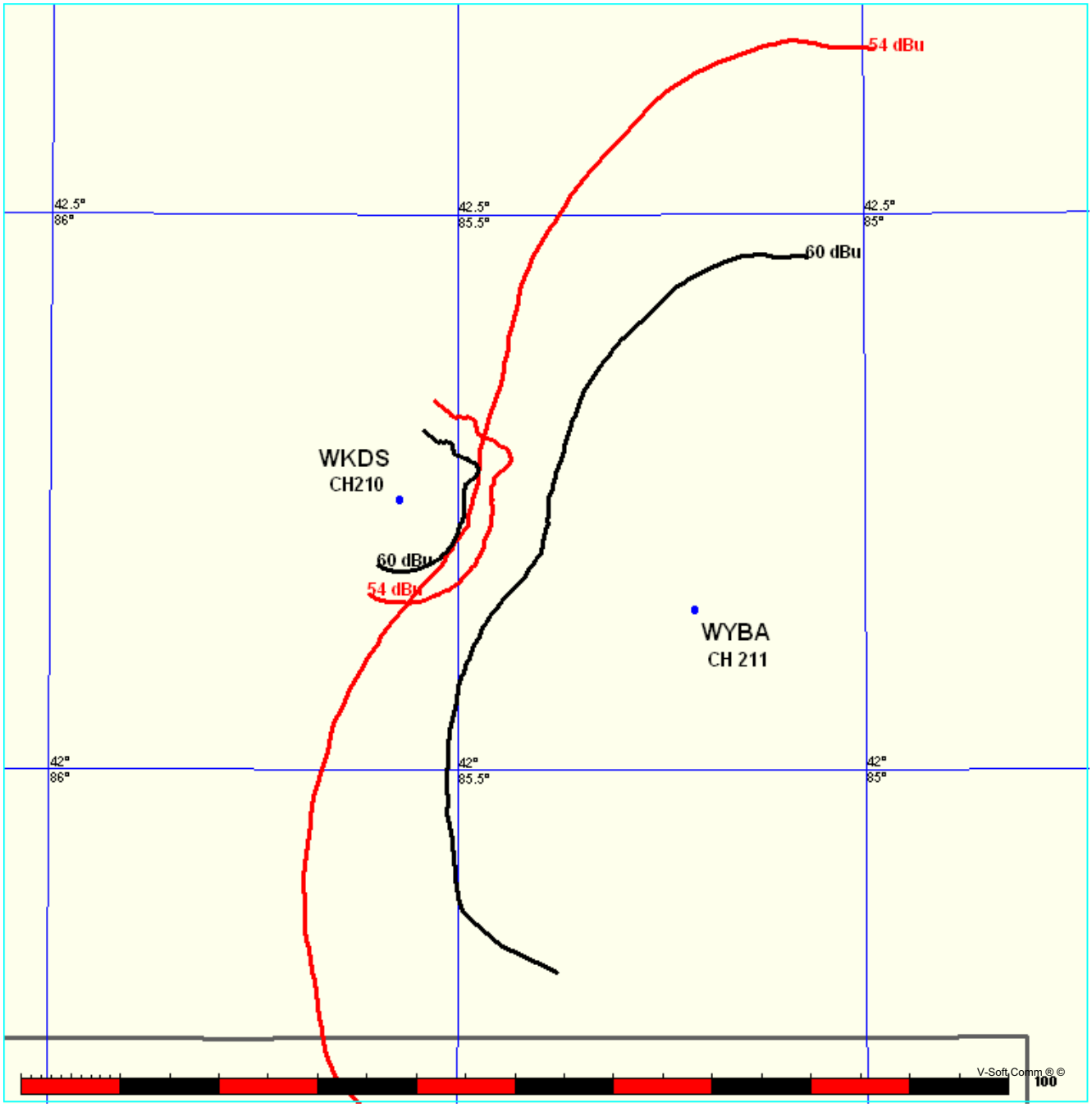
| Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Actual (dBu) |
|---|---|---|---|---|---|---|---|---|
| 316.0 | 000.1263 | 0056.8 | 008.3 | 150.0 | 026.2679 | 0081.0 | 057.7 | 53.72 |
| 317.0 | 000.1230 | 0056.7 | 008.2 | 149.8 | 026.2859 | 0081.1 | 057.8 | 53.72 |
| 318.0 | 000.1198 | 0056.6 | 008.1 | 149.7 | 026.3037 | 0081.3 | 057.8 | 53.72 |
| 319.0 | 000.1166 | 0056.5 | 008.1 | 149.5 | 026.3213 | 0081.4 | 057.9 | 53.72 |
| 320.0 | 000.1134 | 0056.4 | 008.0 | 149.4 | 026.3387 | 0081.6 | 057.9 | 53.72 |
| 321.0 | 000.1134 | 0056.2 | 008.0 | 149.2 | 026.3548 | 0081.7 | 057.9 | 53.74 |
| 322.0 | 000.1134 | 0055.9 | 008.0 | 149.1 | 026.3710 | 0081.9 | 057.9 | 53.75 |
| 323.0 | 000.1134 | 0055.6 | 007.9 | 149.0 | 026.3871 | 0082.0 | 057.9 | 53.76 |
| 324.0 | 000.1134 | 0055.4 | 007.9 | 148.8 | 026.4032 | 0082.2 | 057.9 | 53.77 |
| 325.0 | 000.1134 | 0055.1 | 007.9 | 148.7 | 026.4192 | 0082.3 | 057.9 | 53.78 |
| 326.0 | 000.1134 | 0054.8 | 007.9 | 148.5 | 026.4353 | 0082.4 | 057.9 | 53.79 |
| 327.0 | 000.1134 | 0054.5 | 007.9 | 148.4 | 026.4512 | 0082.6 | 058.0 | 53.80 |
| 328.0 | 000.1134 | 0054.1 | 007.8 | 148.3 | 026.4670 | 0082.7 | 058.0 | 53.80 |
| 329.0 | 000.1134 | 0053.8 | 007.8 | 148.1 | 026.4826 | 0082.8 | 058.0 | 53.80 |
| 330.0 | 000.1134 | 0053.3 | 007.8 | 148.0 | 026.4981 | 0082.9 | 058.1 | 53.79 |
| 331.0 | 000.1134 | 0052.7 | 007.7 | 147.9 | 026.5135 | 0083.0 | 058.1 | 53.78 |
| 332.0 | 000.1134 | 0052.2 | 007.7 | 147.7 | 026.5285 | 0083.0 | 058.2 | 53.77 |
| 333.0 | 000.1134 | 0051.7 | 007.6 | 147.6 | 026.5435 | 0083.1 | 058.2 | 53.76 |
| 334.0 | 000.1134 | 0051.4 | 007.6 | 147.5 | 026.5583 | 0083.1 | 058.2 | 53.75 |
| 335.0 | 000.1134 | 0051.1 | 007.6 | 147.4 | 026.5730 | 0083.2 | 058.3 | 53.75 |
| 336.0 | 000.1134 | 0051.0 | 007.6 | 147.2 | 026.5879 | 0083.2 | 058.3 | 53.74 |
| 337.0 | 000.1134 | 0050.8 | 007.5 | 147.1 | 026.6026 | 0083.2 | 058.4 | 53.73 |
| 338.0 | 000.1147 | 0050.9 | 007.6 | 147.0 | 026.6181 | 0083.2 | 058.3 | 53.74 |
| 339.0 | 000.1159 | 0051.1 | 007.6 | 146.8 | 026.6340 | 0083.2 | 058.3 | 53.75 |
| 340.0 | 000.1172 | 0051.7 | 007.7 | 146.7 | 026.6509 | 0083.3 | 058.3 | 53.76 |
| 341.0 | 000.1163 | 0052.5 | 007.7 | 146.6 | 026.6671 | 0083.3 | 058.3 | 53.77 |
| 342.0 | 000.1153 | 0052.9 | 007.8 | 146.4 | 026.6826 | 0083.3 | 058.3 | 53.77 |
| 343.0 | 000.1143 | 0053.1 | 007.8 | 146.3 | 026.6977 | 0083.3 | 058.3 | 53.76 |
| 344.0 | 000.1134 | 0053.2 | 007.7 | 146.2 | 026.7121 | 0083.3 | 058.4 | 53.75 |
| 345.0 | 000.1142 | 0053.3 | 007.8 | 146.0 | 026.7279 | 0083.3 | 058.4 | 53.74 |
| 346.0 | 000.1151 | 0053.5 | 007.8 | 145.9 | 026.7438 | 0083.3 | 058.4 | 53.74 |
| 347.0 | 000.1159 | 0053.7 | 007.8 | 145.8 | 026.7597 | 0083.3 | 058.4 | 53.73 |
| 348.0 | 000.1168 | 0053.9 | 007.9 | 145.6 | 026.7758 | 0083.3 | 058.5 | 53.73 |
| 349.0 | 000.1176 | 0054.1 | 007.9 | 145.5 | 026.7917 | 0083.2 | 058.5 | 53.72 |
| 350.0 | 000.1185 | 0054.3 | 007.9 | 145.4 | 026.8075 | 0083.2 | 058.5 | 53.71 |
| 351.0 | 000.1159 | 0054.3 | 007.9 | 145.3 | 026.8198 | 0083.1 | 058.6 | 53.67 |
| 352.0 | 000.1134 | 0054.3 | 007.8 | 145.2 | 026.8318 | 0083.0 | 058.7 | 53.63 |
| 353.0 | 000.1103 | 0054.8 | 007.8 | 145.0 | 026.8447 | 0083.0 | 058.8 | 53.60 |
| 354.0 | 000.1072 | 0056.3 | 007.9 | 144.9 | 026.8612 | 0082.8 | 058.8 | 53.59 |
| 355.0 | 000.1041 | 0057.6 | 007.9 | 144.8 | 026.8767 | 0082.7 | 058.8 | 53.57 |
| 356.0 | 000.1012 | 0058.3 | 007.9 | 144.7 | 026.8895 | 0082.6 | 058.9 | 53.54 |
| 357.0 | 000.1048 | 0058.7 | 008.0 | 144.5 | 026.9091 | 0082.5 | 058.9 | 53.53 |
| 358.0 | 000.1084 | 0058.7 | 008.1 | 144.3 | 026.9277 | 0082.4 | 058.9 | 53.53 |
| 359.0 | 000.1121 | 0058.9 | 008.2 | 144.2 | 026.9471 | 0082.2 | 058.9 | 53.52 |
| 000.0 | 000.1159 | 0058.9 | 008.2 | 144.0 | 026.9655 | 0082.1 | 058.9 | 53.50 |
| 001.0 | 000.1206 | 0058.9 | 008.3 | 143.9 | 026.9848 | 0082.0 | 059.0 | 53.49 |

# Exhibit 16.3
# Contour Protection Studies Toward WKDS(FM) - Kalamazoo, MI

FMCommander Single Allocation Study - 07-13-2010 - USGS 03 SEC
WYBA's Overlaps (In= 5.74 km, Out= 0.68 km)

WYBA CH 211 B DA
Lat= 42 08 41.0, Lng= 85 12 34.0
32.0 kW 76.5 M HAAT, 359 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WKDS CH 210 A BLED19830204AK
Lat= 42 14 36.0, Lng= 85 34 19.0
0.14 kW 38 M HAAT, 303 M COR
Prot.= 60 dBu, Intef.= 54 dBu





***Munn-Reese, Inc.***
Broadcast Engineering Consultants
Coldwater, MI 49036

# Exhibit 16.3
# Contour Protection Studies Toward WKDS(FM) - Kalamazoo, MI

07-13-2010 USGS 03 SEC Terrain Data FMOver Analysis

| | |
|---|---|
| WYBA | WKDS BLED19830204AK |
| Channel = 211B | Channel = 210A |
| Max ERP = 32 kW | Max ERP = 0.14 kW |
| RCAMSL = 359 M | RCAMSL = 303 M |
| N. Lat. 42 08 41.0 | N. Lat. 42 14 36.0 |
| W. Lng. 85 12 34.0 | W. Lng. 85 34 19.0 |
| 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) |
|---|---|---|---|---|---|---|---|---|---|
| 246.0 | 007.2748 | 0081.6 | 026.8 | 166.1 | 000.1400 | 0042.9 | 022.5 | 41.36 | |
| 247.0 | 006.9371 | 0081.4 | 026.5 | 165.4 | 000.1400 | 0042.8 | 022.0 | 41.74 | |
| 248.0 | 006.6073 | 0081.2 | 026.2 | 164.8 | 000.1400 | 0042.8 | 021.5 | 42.12 | |
| 249.0 | 006.2856 | 0081.0 | 025.9 | 164.0 | 000.1400 | 0042.7 | 021.0 | 42.48 | |
| 250.0 | 005.9720 | 0081.0 | 025.6 | 163.3 | 000.1400 | 0042.6 | 020.6 | 42.84 | |
| 251.0 | 005.7284 | 0081.2 | 025.4 | 162.8 | 000.1400 | 0042.5 | 020.1 | 43.18 | |
| 252.0 | 005.4900 | 0081.6 | 025.2 | 162.3 | 000.1400 | 0042.5 | 019.7 | 43.53 | |
| 253.0 | 005.2566 | 0081.5 | 024.9 | 161.5 | 000.1400 | 0042.4 | 019.2 | 43.87 | |
| 254.0 | 005.0283 | 0080.9 | 024.6 | 160.5 | 000.1400 | 0042.2 | 018.8 | 44.18 | |
| 255.0 | 004.8050 | 0080.1 | 024.2 | 159.3 | 000.1400 | 0042.1 | 018.4 | 44.48 | |
| 256.0 | 004.5868 | 0080.1 | 024.0 | 158.3 | 000.1400 | 0042.0 | 018.0 | 44.79 | |
| 257.0 | 004.3737 | 0080.0 | 023.7 | 157.2 | 000.1400 | 0042.1 | 017.7 | 45.12 | |
| 258.0 | 004.1657 | 0079.6 | 023.4 | 156.0 | 000.1400 | 0042.1 | 017.3 | 45.43 | |
| 259.0 | 003.9627 | 0079.3 | 023.1 | 154.7 | 000.1400 | 0041.9 | 017.0 | 45.65 | |
| 260.0 | 003.7648 | 0079.4 | 022.8 | 153.5 | 000.1400 | 0041.7 | 016.7 | 45.88 | |
| 261.0 | 003.6127 | 0079.3 | 022.6 | 152.3 | 000.1400 | 0042.2 | 016.4 | 46.26 | |
| 262.0 | 003.4637 | 0078.7 | 022.3 | 150.8 | 000.1400 | 0042.5 | 016.1 | 46.56 | |
| 263.0 | 003.3179 | 0078.3 | 022.0 | 149.4 | 000.1400 | 0042.0 | 015.9 | 46.67 | |
| 264.0 | 003.1752 | 0078.1 | 021.8 | 148.0 | 000.1400 | 0041.8 | 015.6 | 46.82 | |
| 265.0 | 003.0356 | 0077.9 | 021.5 | 146.5 | 000.1400 | 0042.3 | 015.4 | 47.13 | |
| 266.0 | 002.8992 | 0077.8 | 021.3 | 145.0 | 000.1400 | 0042.2 | 015.2 | 47.30 | |
| 267.0 | 002.7660 | 0077.6 | 021.0 | 143.4 | 000.1400 | 0041.8 | 015.0 | 47.34 | |
| 268.0 | 002.6358 | 0077.3 | 020.7 | 141.7 | 000.1400 | 0041.1 | 014.9 | 47.19 | |
| 269.0 | 002.5088 | 0077.0 | 020.4 | 140.0 | 000.1400 | 0041.0 | 014.8 | 47.30 | |
| 270.0 | 002.3849 | 0076.5 | 020.1 | 138.2 | 000.1400 | 0041.4 | 014.7 | 47.47 | |
| 271.0 | 002.2881 | 0076.0 | 019.8 | 136.5 | 000.1400 | 0040.9 | 014.6 | 47.44 | |
| 272.0 | 002.1933 | 0075.9 | 019.6 | 134.9 | 000.1400 | 0040.6 | 014.6 | 47.45 | |
| 273.0 | 002.1004 | 0075.7 | 019.4 | 133.3 | 000.1400 | 0040.4 | 014.5 | 47.47 | |
| 274.0 | 002.0096 | 0075.5 | 019.1 | 131.6 | 000.1400 | 0040.1 | 014.5 | 47.44 | |
| 275.0 | 001.9208 | 0075.3 | 018.9 | 130.0 | 000.1400 | 0040.1 | 014.5 | 47.42 | |
| 276.0 | 001.8340 | 0074.8 | 018.6 | 128.3 | 000.1400 | 0039.5 | 014.6 | 47.22 | |
| 277.0 | 001.7492 | 0074.5 | 018.3 | 126.7 | 000.1400 | 0039.3 | 014.6 | 47.11 | |
| 278.0 | 001.6664 | 0074.3 | 018.1 | 125.1 | 000.1400 | 0038.7 | 014.7 | 46.89 | |
| 279.0 | 001.5856 | 0074.3 | 017.8 | 123.6 | 000.1400 | 0038.5 | 014.8 | 46.75 | |
| 280.0 | 001.5068 | 0074.2 | 017.6 | 122.1 | 000.1400 | 0038.3 | 014.9 | 46.57 | |

# Exhibit 16.3
# Contour Protection Studies Toward WKDS(FM) - Kalamazoo, MI

| Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Actual (dBu) |
|---|---|---|---|---|---|---|---|---|
| 281.0 | 001.4806 | 0074.1 | 017.5 | 120.9 | 000.1400 | 0038.2 | 014.9 | 46.58 |
| 282.0 | 001.4545 | 0074.0 | 017.4 | 119.6 | 000.1400 | 0037.8 | 014.9 | 46.48 |
| 283.0 | 001.4287 | 0073.9 | 017.3 | 118.4 | 000.1400 | 0037.4 | 014.9 | 46.39 |
| 284.0 | 001.4031 | 0073.7 | 017.2 | 117.2 | 000.1400 | 0037.0 | 014.9 | 46.27 |
| 285.0 | 001.3778 | 0073.4 | 017.1 | 115.9 | 000.1400 | 0036.3 | 015.0 | 46.03 |
| 286.0 | 001.3527 | 0073.0 | 016.9 | 114.7 | 000.1400 | 0035.8 | 015.0 | 45.92 |
| 287.0 | 001.3278 | 0072.8 | 016.8 | 113.6 | 000.1400 | 0035.9 | 015.1 | 45.89 |
| 288.0 | 001.3031 | 0072.8 | 016.7 | 112.4 | 000.1400 | 0036.2 | 015.2 | 45.89 |
| 289.0 | 001.2787 | 0072.7 | 016.6 | 111.3 | 000.1400 | 0036.3 | 015.2 | 45.87 |
| 290.0 | 001.2545 | 0072.5 | 016.5 | 110.2 | 000.1400 | 0036.5 | 015.4 | 45.80 |
| 291.0 | 001.2787 | 0072.5 | 016.6 | 109.1 | 000.1400 | 0036.6 | 015.3 | 45.91 |
| 292.0 | 001.3031 | 0072.5 | 016.7 | 108.0 | 000.1400 | 0036.8 | 015.2 | 46.02 |
| 293.0 | 001.3278 | 0072.3 | 016.8 | 106.9 | 000.1400 | 0036.8 | 015.2 | 46.05 |
| 294.0 | 001.3527 | 0072.0 | 016.8 | 105.8 | 000.1400 | 0036.7 | 015.1 | 46.04 |
| 295.0 | 001.3778 | 0071.8 | 016.9 | 104.6 | 000.1400 | 0036.6 | 015.1 | 46.03 |
| 296.0 | 001.4031 | 0071.6 | 016.9 | 103.5 | 000.1400 | 0036.5 | 015.1 | 46.01 |
| 297.0 | 001.4287 | 0071.4 | 017.0 | 102.3 | 000.1400 | 0036.1 | 015.1 | 45.91 |
| 298.0 | 001.4545 | 0071.3 | 017.1 | 101.2 | 000.1400 | 0035.8 | 015.2 | 45.81 |
| 299.0 | 001.4806 | 0071.2 | 017.1 | 100.0 | 000.1400 | 0035.7 | 015.2 | 45.76 |
| 300.0 | 001.5068 | 0071.1 | 017.2 | 098.9 | 000.1400 | 0035.5 | 015.2 | 45.69 |
| 301.0 | 001.5856 | 0070.7 | 017.4 | 097.5 | 000.1400 | 0035.6 | 015.2 | 45.76 |
| 302.0 | 001.6664 | 0070.2 | 017.6 | 096.2 | 000.1400 | 0035.5 | 015.1 | 45.77 |
| 303.0 | 001.7492 | 0069.7 | 017.7 | 094.9 | 000.1400 | 0035.3 | 015.1 | 45.72 |
| 304.0 | 001.8340 | 0069.7 | 017.9 | 093.4 | 000.1400 | 0034.8 | 015.1 | 45.64 |
| 305.0 | 001.9208 | 0069.6 | 018.2 | 092.0 | 000.1400 | 0034.3 | 015.1 | 45.52 |
| 306.0 | 002.0096 | 0069.3 | 018.3 | 090.6 | 000.1400 | 0034.8 | 015.1 | 45.62 |
| 307.0 | 002.1004 | 0068.9 | 018.5 | 089.3 | 000.1400 | 0034.6 | 015.2 | 45.51 |
| 308.0 | 002.1933 | 0068.3 | 018.6 | 088.0 | 000.1400 | 0034.0 | 015.3 | 45.29 |
| 309.0 | 002.2881 | 0067.6 | 018.7 | 086.8 | 000.1400 | 0033.7 | 015.4 | 45.10 |
| 310.0 | 002.3849 | 0067.0 | 018.8 | 085.6 | 000.1400 | 0034.0 | 015.5 | 45.04 |
| 311.0 | 002.5088 | 0066.5 | 019.0 | 084.3 | 000.1400 | 0034.3 | 015.6 | 45.01 |
| 312.0 | 002.6358 | 0065.9 | 019.2 | 083.1 | 000.1400 | 0035.0 | 015.8 | 45.07 |
| 313.0 | 002.7660 | 0065.5 | 019.4 | 081.8 | 000.1400 | 0036.1 | 015.9 | 45.22 |
| 314.0 | 002.8992 | 0065.1 | 019.5 | 080.5 | 000.1400 | 0037.2 | 016.1 | 45.35 |
| 315.0 | 003.0356 | 0064.7 | 019.7 | 079.4 | 000.1400 | 0037.4 | 016.3 | 45.25 |
| 316.0 | 003.1752 | 0064.2 | 019.9 | 078.2 | 000.1400 | 0037.7 | 016.5 | 45.14 |
| 317.0 | 003.3179 | 0063.8 | 020.0 | 077.1 | 000.1400 | 0039.9 | 016.7 | 45.48 |
| 318.0 | 003.4637 | 0063.6 | 020.2 | 076.0 | 000.1400 | 0042.9 | 016.9 | 45.96 |
| 319.0 | 003.6127 | 0063.6 | 020.4 | 074.8 | 000.1400 | 0047.2 | 017.1 | 46.69 |
| 320.0 | 003.7648 | 0063.7 | 020.6 | 073.6 | 000.1400 | 0051.4 | 017.3 | 47.30 |
| 321.0 | 003.9627 | 0063.9 | 020.9 | 072.3 | 000.1400 | 0054.1 | 017.6 | 47.58 |
| 322.0 | 004.1657 | 0064.0 | 021.2 | 071.1 | 000.1400 | 0055.8 | 017.8 | 47.64 |
| 323.0 | 004.3737 | 0064.0 | 021.4 | 069.9 | 000.1400 | 0056.4 | 018.1 | 47.50 |
| 324.0 | 004.5868 | 0064.2 | 021.7 | 068.8 | 000.1400 | 0056.7 | 018.4 | 47.31 |
| 325.0 | 004.8050 | 0064.7 | 022.0 | 067.6 | 000.1400 | 0056.9 | 018.7 | 47.08 |
| 326.0 | 005.0283 | 0065.2 | 022.3 | 066.4 | 000.1400 | 0057.0 | 019.0 | 46.83 |

# Exhibit 16.3
# Contour Protection Studies Toward WKDS(FM) - Kalamazoo, MI

07-13-2010  USGS 03 SEC Terrain Data

| WKDS BLED19830204AK | WYBA |
|---|---|
| Channel = 210A | Channel = 211B |
| Max ERP = 0.14 kW | Max ERP = 32 kW |
| RCAMSL = 303 M | RCAMSL = 359 M |
| N. Lat. 42 14 36.0 | N. Lat. 42 08 41.0 |
| W. Lng. 85 34 19.0 | W. Lng. 85 12 34.0 |
| 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) |
|---|---|---|---|---|---|---|---|---|---|
| 065.0 | 000.1400 | 0055.6 | 008.4 | 303.2 | 001.7695 | 0069.6 | 026.6 | 53.67 | |
| 066.0 | 000.1400 | 0056.9 | 008.5 | 303.3 | 001.7714 | 0069.6 | 026.4 | 53.80 | |
| 067.0 | 000.1400 | 0057.0 | 008.5 | 303.1 | 001.7568 | 0069.7 | 026.3 | 53.85 | |
| 068.0 | 000.1400 | 0056.8 | 008.5 | 302.9 | 001.7393 | 0069.8 | 026.2 | 53.90 | |
| 069.0 | 000.1400 | 0056.7 | 008.5 | 302.7 | 001.7222 | 0069.9 | 026.1 | 53.94 | |
| 070.0 | 000.1400 | 0056.4 | 008.5 | 302.4 | 001.7022 | 0070.0 | 026.0 | 53.97 | |
| 071.0 | 000.1400 | 0055.9 | 008.4 | 302.2 | 001.6790 | 0070.1 | 025.9 | 53.99 | |
| 072.0 | 000.1400 | 0054.7 | 008.3 | 301.8 | 001.6478 | 0070.3 | 025.8 | 53.97 | |
| 073.0 | 000.1400 | 0052.8 | 008.2 | 301.3 | 001.6089 | 0070.6 | 025.8 | 53.90 | |
| 074.0 | 000.1400 | 0050.3 | 007.9 | 300.7 | 001.5622 | 0070.8 | 025.9 | 53.76 | |
| 075.0 | 000.1400 | 0046.5 | 007.6 | 299.9 | 001.5051 | 0071.1 | 026.0 | 53.53 | |
| 076.0 | 000.1400 | 0042.9 | 007.3 | 299.2 | 001.4868 | 0071.2 | 026.2 | 53.39 | |
| 077.0 | 000.1400 | 0040.3 | 007.0 | 298.7 | 001.4725 | 0071.2 | 026.3 | 53.29 | |
| 078.0 | 000.1400 | 0037.9 | 006.8 | 298.2 | 001.4594 | 0071.3 | 026.3 | 53.21 | |
| 079.0 | 000.1400 | 0037.5 | 006.8 | 297.9 | 001.4530 | 0071.3 | 026.3 | 53.23 | |
| 080.0 | 000.1400 | 0037.2 | 006.8 | 297.7 | 001.4470 | 0071.3 | 026.2 | 53.25 | |
| 081.0 | 000.1400 | 0036.9 | 006.7 | 297.5 | 001.4407 | 0071.4 | 026.2 | 53.27 | |
| 082.0 | 000.1400 | 0035.9 | 006.6 | 297.1 | 001.4323 | 0071.4 | 026.2 | 53.24 | |
| 083.0 | 000.1400 | 0035.0 | 006.6 | 296.8 | 001.4244 | 0071.4 | 026.2 | 53.22 | |
| 084.0 | 000.1400 | 0034.4 | 006.5 | 296.6 | 001.4173 | 0071.5 | 026.2 | 53.21 | |
| 085.0 | 000.1400 | 0034.0 | 006.5 | 296.3 | 001.4110 | 0071.5 | 026.2 | 53.22 | |
| 086.0 | 000.1400 | 0033.9 | 006.5 | 296.1 | 001.4052 | 0071.5 | 026.1 | 53.24 | |
| 087.0 | 000.1400 | 0033.8 | 006.5 | 295.8 | 001.3993 | 0071.6 | 026.1 | 53.25 | |
| 088.0 | 000.1400 | 0034.0 | 006.5 | 295.7 | 001.3944 | 0071.6 | 026.0 | 53.29 | |
| 089.0 | 000.1400 | 0034.4 | 006.5 | 295.5 | 001.3895 | 0071.7 | 025.9 | 53.34 | |
| 090.0 | 000.1400 | 0034.8 | 006.6 | 295.3 | 001.3846 | 0071.7 | 025.8 | 53.38 | |
| 091.0 | 000.1400 | 0034.5 | 006.5 | 295.0 | 001.3782 | 0071.8 | 025.8 | 53.39 | |
| 092.0 | 000.1400 | 0034.3 | 006.5 | 294.8 | 001.3718 | 0071.9 | 025.8 | 53.40 | |
| 093.0 | 000.1400 | 0034.6 | 006.5 | 294.5 | 001.3664 | 0072.0 | 025.7 | 53.43 | |
| 094.0 | 000.1400 | 0035.0 | 006.6 | 294.3 | 001.3612 | 0072.0 | 025.6 | 53.48 | |
| 095.0 | 000.1400 | 0035.3 | 006.6 | 294.1 | 001.3556 | 0072.0 | 025.6 | 53.50 | |
| 096.0 | 000.1400 | 0035.5 | 006.6 | 293.9 | 001.3497 | 0072.1 | 025.5 | 53.53 | |
| 097.0 | 000.1400 | 0035.6 | 006.6 | 293.6 | 001.3437 | 0072.1 | 025.5 | 53.55 | |

# Exhibit 16.3
# Contour Protection Studies Toward WKDS(FM) - Kalamazoo, MI

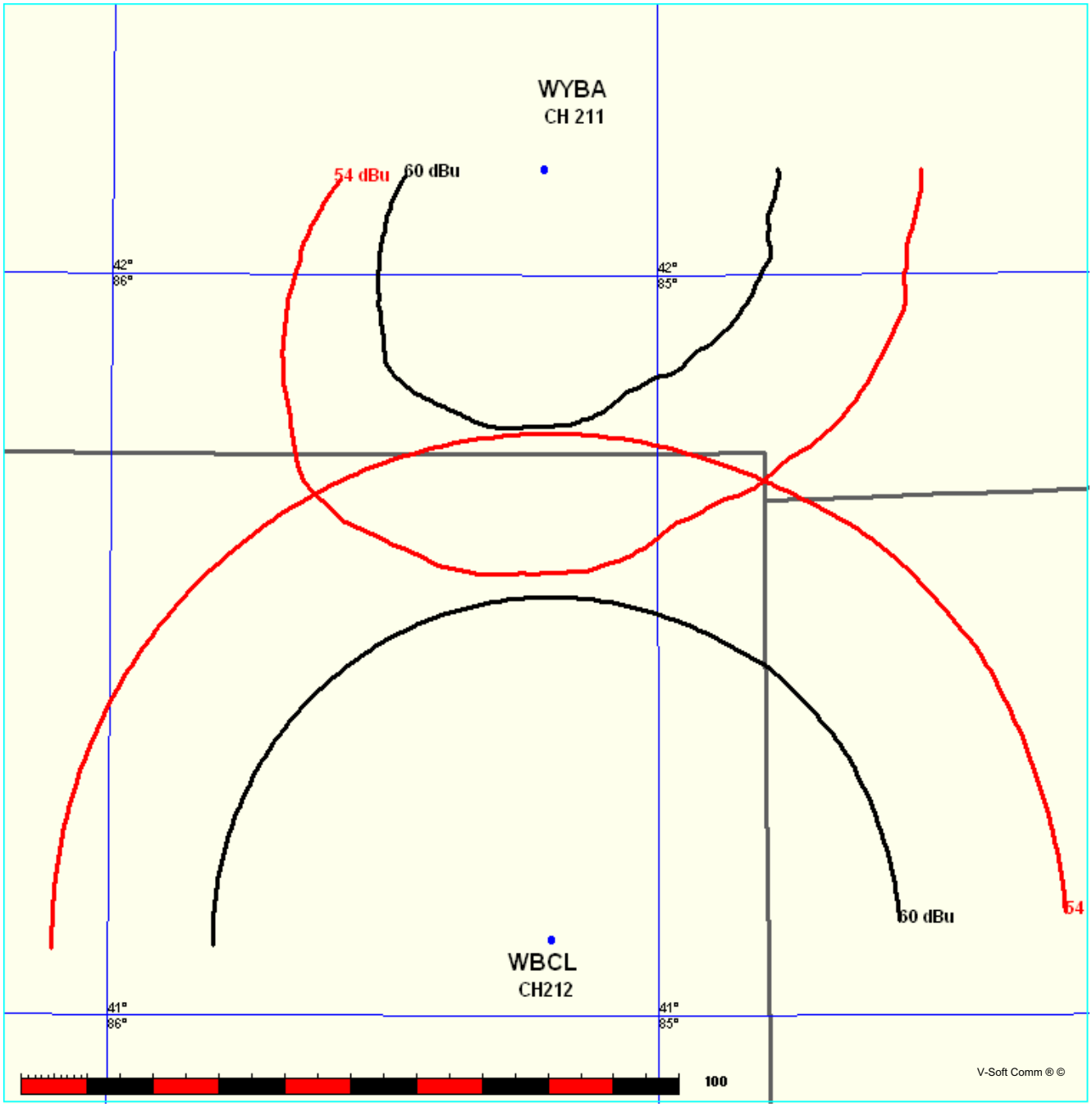
| Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Actual (dBu) |
|---|---|---|---|---|---|---|---|---|
| 098.0 | 000.1400 | 0035.6 | 006.6 | 293.4 | 001.3375 | 0072.2 | 025.4 | 53.56 |
| 099.0 | 000.1400 | 0035.5 | 006.6 | 293.1 | 001.3311 | 0072.3 | 025.4 | 53.56 |
| 100.0 | 000.1400 | 0035.7 | 006.6 | 292.9 | 001.3249 | 0072.3 | 025.4 | 53.57 |
| 101.0 | 000.1400 | 0035.7 | 006.6 | 292.6 | 001.3187 | 0072.4 | 025.4 | 53.58 |
| 102.0 | 000.1400 | 0036.0 | 006.7 | 292.4 | 001.3125 | 0072.4 | 025.3 | 53.59 |
| 103.0 | 000.1400 | 0036.4 | 006.7 | 292.1 | 001.3064 | 0072.4 | 025.3 | 53.61 |
| 104.0 | 000.1400 | 0036.7 | 006.7 | 291.9 | 001.3002 | 0072.5 | 025.2 | 53.63 |
| 105.0 | 000.1400 | 0036.6 | 006.7 | 291.6 | 001.2937 | 0072.5 | 025.2 | 53.62 |
| 106.0 | 000.1400 | 0036.7 | 006.7 | 291.3 | 001.2872 | 0072.5 | 025.2 | 53.61 |
| 107.0 | 000.1400 | 0036.8 | 006.7 | 291.1 | 001.2807 | 0072.5 | 025.2 | 53.60 |
| 108.0 | 000.1400 | 0036.8 | 006.7 | 290.8 | 001.2742 | 0072.5 | 025.2 | 53.58 |
| 109.0 | 000.1400 | 0036.6 | 006.7 | 290.5 | 001.2677 | 0072.5 | 025.2 | 53.55 |
| 110.0 | 000.1400 | 0036.5 | 006.7 | 290.3 | 001.2612 | 0072.5 | 025.2 | 53.52 |
| 111.0 | 000.1400 | 0036.4 | 006.7 | 290.0 | 001.2548 | 0072.5 | 025.2 | 53.49 |
| 112.0 | 000.1400 | 0036.2 | 006.7 | 289.7 | 001.2606 | 0072.6 | 025.2 | 53.51 |
| 113.0 | 000.1400 | 0036.1 | 006.7 | 289.5 | 001.2670 | 0072.7 | 025.2 | 53.52 |
| 114.0 | 000.1400 | 0035.9 | 006.6 | 289.2 | 001.2733 | 0072.7 | 025.3 | 53.53 |
| 115.0 | 000.1400 | 0035.9 | 006.6 | 289.0 | 001.2797 | 0072.7 | 025.3 | 53.55 |
| 116.0 | 000.1400 | 0036.3 | 006.7 | 288.7 | 001.2863 | 0072.8 | 025.2 | 53.59 |
| 117.0 | 000.1400 | 0036.9 | 006.7 | 288.4 | 001.2932 | 0072.8 | 025.2 | 53.64 |
| 118.0 | 000.1400 | 0037.3 | 006.8 | 288.1 | 001.3000 | 0072.8 | 025.2 | 53.68 |
| 119.0 | 000.1400 | 0037.6 | 006.8 | 287.9 | 001.3068 | 0072.8 | 025.2 | 53.70 |
| 120.0 | 000.1400 | 0037.9 | 006.8 | 287.6 | 001.3137 | 0072.8 | 025.2 | 53.73 |
| 121.0 | 000.1400 | 0038.2 | 006.9 | 287.3 | 001.3206 | 0072.8 | 025.2 | 53.75 |
| 122.0 | 000.1400 | 0038.3 | 006.9 | 287.0 | 001.3272 | 0072.8 | 025.2 | 53.75 |
| 123.0 | 000.1400 | 0038.4 | 006.9 | 286.8 | 001.3338 | 0072.8 | 025.2 | 53.76 |
| 124.0 | 000.1400 | 0038.5 | 006.9 | 286.5 | 001.3405 | 0072.9 | 025.3 | 53.77 |
| 125.0 | 000.1400 | 0038.7 | 006.9 | 286.2 | 001.3472 | 0073.0 | 025.3 | 53.79 |
| 126.0 | 000.1400 | 0039.1 | 006.9 | 285.9 | 001.3543 | 0073.1 | 025.3 | 53.82 |
| 127.0 | 000.1400 | 0039.3 | 006.9 | 285.7 | 001.3611 | 0073.2 | 025.3 | 53.83 |
| 128.0 | 000.1400 | 0039.2 | 006.9 | 285.4 | 001.3673 | 0073.2 | 025.4 | 53.82 |
| 129.0 | 000.1400 | 0039.9 | 007.0 | 285.1 | 001.3750 | 0073.3 | 025.4 | 53.86 |
| 130.0 | 000.1400 | 0040.1 | 007.0 | 284.8 | 001.3818 | 0073.4 | 025.4 | 53.87 |
| 131.0 | 000.1400 | 0040.1 | 007.0 | 284.6 | 001.3883 | 0073.6 | 025.5 | 53.87 |
| 132.0 | 000.1400 | 0040.1 | 007.0 | 284.3 | 001.3945 | 0073.6 | 025.5 | 53.86 |
| 133.0 | 000.1400 | 0040.3 | 007.0 | 284.1 | 001.4012 | 0073.7 | 025.6 | 53.86 |
| 134.0 | 000.1400 | 0040.5 | 007.1 | 283.8 | 001.4076 | 0073.8 | 025.6 | 53.86 |
| 135.0 | 000.1400 | 0040.6 | 007.1 | 283.6 | 001.4140 | 0073.8 | 025.7 | 53.85 |
| 136.0 | 000.1400 | 0040.8 | 007.1 | 283.3 | 001.4207 | 0073.9 | 025.7 | 53.84 |
| 137.0 | 000.1400 | 0041.1 | 007.1 | 283.1 | 001.4274 | 0073.9 | 025.8 | 53.83 |
| 138.0 | 000.1400 | 0041.4 | 007.1 | 282.8 | 001.4341 | 0073.9 | 025.8 | 53.82 |
| 139.0 | 000.1400 | 0041.5 | 007.1 | 282.6 | 001.4401 | 0073.9 | 025.9 | 53.79 |
| 140.0 | 000.1400 | 0041.0 | 007.1 | 282.4 | 001.4443 | 0073.9 | 026.0 | 53.73 |
| 141.0 | 000.1400 | 0041.0 | 007.1 | 282.2 | 001.4497 | 0073.9 | 026.1 | 53.69 |
| 142.0 | 000.1400 | 0041.2 | 007.1 | 281.9 | 001.4560 | 0074.0 | 026.1 | 53.68 |
| 143.0 | 000.1400 | 0041.7 | 007.2 | 281.7 | 001.4628 | 0074.0 | 026.2 | 53.66 |
| 144.0 | 000.1400 | 0042.1 | 007.2 | 281.4 | 001.4696 | 0074.0 | 026.2 | 53.65 |
| 145.0 | 000.1400 | 0042.2 | 007.2 | 281.2 | 001.4754 | 0074.0 | 026.3 | 53.62 |

# Exhibit 16.4
# Contour Protection Studies Toward WBCL(FM) - Fort Wayne, IN

FMCommander Single Allocation Study - 07-13-2010 - USGS 03 SEC
WYBA's Overlaps (In= 1.13 km, Out= 3.6 km)

WYBA CH 211 B DA
Lat= 42 08 41.0, Lng= 85 12 34.0
32.0 kW 76.5 M HAAT, 359 M COR
Prot.= 60 dBu, Intef.= 54 dBu

WBCL CH 212 B BLED20040528AHQ
Lat= 41 06 13.0, Lng= 85 11 46.0
26.0 kW 211 M HAAT, 457 M COR
Prot.= 60 dBu, Intef.= 54 dBu




***Munn-Reese, Inc.***
Broadcast Engineering Consultants
Coldwater, MI 49036

# Exhibit 16.4
# Contour Protection Studies Toward WBCL(FM) - Fort Wayne, IN

07-13-2010 USGS 03 SEC Terrain Data FMOver Analysis

| WYBA | WBCL BLED20040528AHQ |
|---|---|
| Channel = 211B | Channel = 212B |
| Max ERP = 32 kW | Max ERP = 26 kW |
| RCAMSL = 359 M | RCAMSL = 457 M |
| N. Lat. 42 08 41.0 | N. Lat. 41 06 13.0 |
| W. Lng. 85 12 34.0 | W. Lng. 85 11 46.0 |
| 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) |
|---|---|---|---|---|---|---|---|---|---|
| 135.0 | 029.6758 | 0079.9 | 036.7 | 015.3 | 026.0000 | 0199.0 | 093.0 | 48.57 | |
| 136.0 | 029.2215 | 0080.2 | 036.7 | 015.1 | 026.0000 | 0199.0 | 092.5 | 48.73 | |
| 137.0 | 028.7707 | 0079.8 | 036.5 | 014.8 | 026.0000 | 0199.0 | 092.1 | 48.87 | |
| 138.0 | 028.3233 | 0079.5 | 036.3 | 014.5 | 026.0000 | 0199.0 | 091.6 | 49.00 | |
| 139.0 | 027.8795 | 0079.4 | 036.1 | 014.2 | 026.0000 | 0199.0 | 091.2 | 49.13 | |
| 140.0 | 027.4392 | 0079.7 | 036.1 | 013.9 | 026.0000 | 0199.0 | 090.7 | 49.28 | |
| 141.0 | 027.3208 | 0080.4 | 036.2 | 013.8 | 026.0000 | 0199.0 | 090.2 | 49.45 | |
| 142.0 | 027.2027 | 0081.0 | 036.3 | 013.6 | 026.0000 | 0199.0 | 089.6 | 49.62 | |
| 143.0 | 027.0848 | 0081.5 | 036.3 | 013.3 | 026.0000 | 0199.0 | 089.1 | 49.79 | |
| 144.0 | 026.9672 | 0082.1 | 036.4 | 013.1 | 026.0000 | 0199.0 | 088.5 | 49.95 | |
| 145.0 | 026.8498 | 0082.9 | 036.5 | 012.9 | 026.0000 | 0199.0 | 088.0 | 50.13 | |
| 146.0 | 026.7327 | 0083.3 | 036.6 | 012.7 | 026.0000 | 0199.0 | 087.5 | 50.28 | |
| 147.0 | 026.6158 | 0083.2 | 036.5 | 012.3 | 026.0000 | 0199.0 | 087.0 | 50.42 | |
| 148.0 | 026.4992 | 0082.9 | 036.4 | 012.0 | 026.0000 | 0199.0 | 086.7 | 50.53 | |
| 149.0 | 026.3828 | 0082.0 | 036.2 | 011.6 | 026.0000 | 0199.0 | 086.4 | 50.62 | |
| 150.0 | 026.2668 | 0080.9 | 036.0 | 011.2 | 026.0000 | 0199.0 | 086.1 | 50.70 | |
| 151.0 | 026.3828 | 0079.9 | 035.8 | 010.8 | 026.0000 | 0199.0 | 085.9 | 50.79 | |
| 152.0 | 026.4992 | 0079.2 | 035.7 | 010.4 | 026.0000 | 0199.0 | 085.6 | 50.88 | |
| 153.0 | 026.6158 | 0079.0 | 035.7 | 010.1 | 026.0000 | 0199.0 | 085.2 | 51.00 | |
| 154.0 | 026.7327 | 0079.1 | 035.7 | 009.8 | 026.0000 | 0199.0 | 084.8 | 51.13 | |
| 155.0 | 026.8498 | 0079.1 | 035.8 | 009.5 | 026.0000 | 0199.0 | 084.4 | 51.26 | |
| 156.0 | 026.9672 | 0079.3 | 035.8 | 009.1 | 026.0000 | 0199.0 | 084.0 | 51.38 | |
| 157.0 | 027.0848 | 0079.2 | 035.9 | 008.8 | 026.0000 | 0199.0 | 083.6 | 51.50 | |
| 158.0 | 027.2027 | 0078.8 | 035.8 | 008.4 | 026.0000 | 0199.0 | 083.3 | 51.59 | |
| 159.0 | 027.3208 | 0078.6 | 035.8 | 008.0 | 026.0000 | 0199.0 | 083.0 | 51.68 | |
| 160.0 | 027.4392 | 0079.1 | 036.0 | 007.7 | 026.0000 | 0199.0 | 082.6 | 51.82 | |
| 161.0 | 027.8795 | 0080.0 | 036.3 | 007.4 | 026.0000 | 0199.0 | 082.0 | 52.00 | |
| 162.0 | 028.3233 | 0080.8 | 036.6 | 007.1 | 026.0000 | 0199.0 | 081.5 | 52.17 | |
| 163.0 | 028.7707 | 0081.5 | 036.8 | 006.8 | 026.0000 | 0199.0 | 081.0 | 52.33 | |
| 164.0 | 029.2215 | 0082.4 | 037.1 | 006.4 | 026.0000 | 0199.0 | 080.5 | 52.50 | |
| 165.0 | 029.6758 | 0083.2 | 037.4 | 006.1 | 026.0000 | 0199.0 | 080.0 | 52.67 | |
| 166.0 | 030.1336 | 0083.6 | 037.6 | 005.7 | 026.0000 | 0199.0 | 079.5 | 52.80 | |
| 167.0 | 030.5950 | 0083.9 | 037.8 | 005.3 | 026.0000 | 0199.0 | 079.2 | 52.92 | |
| 168.0 | 031.0598 | 0083.9 | 037.9 | 004.9 | 026.0000 | 0199.0 | 078.8 | 53.03 | |
| 169.0 | 031.5282 | 0084.1 | 038.1 | 004.4 | 026.0000 | 0199.0 | 078.5 | 53.13 | |

# Exhibit 16.4
# Contour Protection Studies Toward WBCL(FM) - Fort Wayne, IN

| Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Actual (dBu) |
|---|---|---|---|---|---|---|---|---|
| 170.0 | 032.0000 | 0084.1 | 038.2 | 004.0 | 026.0000 | 0199.0 | 078.2 | 53.22 |
| 171.0 | 032.0000 | 0084.2 | 038.2 | 003.5 | 026.0000 | 0199.0 | 078.1 | 53.28 |
| 172.0 | 032.0000 | 0085.1 | 038.4 | 003.1 | 026.0000 | 0199.0 | 077.7 | 53.38 |
| 173.0 | 032.0000 | 0086.6 | 038.7 | 002.6 | 026.0000 | 0199.0 | 077.3 | 53.51 |
| 174.0 | 032.0000 | 0087.1 | 038.7 | 002.2 | 026.0000 | 0199.0 | 077.1 | 53.58 |
| 175.0 | 032.0000 | 0086.8 | 038.7 | 001.7 | 026.0000 | 0199.0 | 077.1 | 53.58 |
| 176.0 | 032.0000 | 0086.5 | 038.6 | 001.2 | 026.0000 | 0198.9 | 077.1 | 53.59 |
| 177.0 | 032.0000 | 0086.5 | 038.6 | 000.7 | 026.0000 | 0199.0 | 077.0 | 53.61 |
| 178.0 | 032.0000 | 0086.6 | 038.7 | 000.2 | 026.0000 | 0199.0 | 077.0 | 53.63 |
| 179.0 | 032.0000 | 0086.7 | 038.7 | 359.7 | 026.0000 | 0199.0 | 077.0 | 53.64 |
| 180.0 | 032.0000 | 0087.0 | 038.7 | 359.2 | 026.0000 | 0199.0 | 076.9 | 53.66 |
| 181.0 | 032.0000 | 0087.2 | 038.8 | 358.7 | 026.0000 | 0199.0 | 076.9 | 53.66 |
| 182.0 | 032.0000 | 0087.4 | 038.8 | 358.2 | 026.0000 | 0199.0 | 076.9 | 53.66 |
| 183.0 | 032.0000 | 0087.4 | 038.8 | 357.7 | 026.0000 | 0199.0 | 076.9 | 53.65 |
| 184.0 | 032.0000 | 0087.8 | 038.9 | 357.2 | 026.0000 | 0199.0 | 076.9 | 53.65 |
| 185.0 | 032.0000 | 0088.5 | 039.0 | 356.7 | 026.0000 | 0199.0 | 076.9 | 53.66 |
| 186.0 | 032.0000 | 0089.3 | 039.2 | 356.2 | 026.0000 | 0199.0 | 076.9 | 53.67 |
| 187.0 | 032.0000 | 0089.8 | 039.3 | 355.6 | 026.0000 | 0199.0 | 076.9 | 53.66 |
| 188.0 | 032.0000 | 0090.6 | 039.4 | 355.1 | 026.0000 | 0199.0 | 076.9 | 53.66 |
| 189.0 | 032.0000 | 0091.2 | 039.5 | 354.6 | 026.0000 | 0199.0 | 076.9 | 53.64 |
| 190.0 | 032.0000 | 0091.3 | 039.5 | 354.1 | 026.0000 | 0199.0 | 077.1 | 53.59 |
| 191.0 | 032.0000 | 0091.3 | 039.5 | 353.6 | 026.0000 | 0199.0 | 077.3 | 53.53 |
| 192.0 | 032.0000 | 0091.4 | 039.6 | 353.1 | 026.0000 | 0199.0 | 077.5 | 53.46 |
| 193.0 | 032.0000 | 0091.4 | 039.6 | 352.7 | 026.0000 | 0199.0 | 077.7 | 53.39 |
| 194.0 | 032.0000 | 0091.2 | 039.5 | 352.2 | 026.0000 | 0199.0 | 078.0 | 53.30 |
| 195.0 | 032.0000 | 0090.9 | 039.5 | 351.8 | 026.0000 | 0199.0 | 078.3 | 53.19 |
| 196.0 | 032.0000 | 0090.4 | 039.4 | 351.3 | 026.0000 | 0199.0 | 078.7 | 53.07 |
| 197.0 | 032.0000 | 0089.2 | 039.2 | 351.0 | 026.0000 | 0199.0 | 079.2 | 52.92 |
| 198.0 | 032.0000 | 0088.4 | 039.0 | 350.6 | 026.0000 | 0199.0 | 079.6 | 52.77 |
| 199.0 | 032.0000 | 0088.3 | 039.0 | 350.2 | 026.0000 | 0199.0 | 080.0 | 52.66 |
| 200.0 | 032.0000 | 0087.9 | 038.9 | 349.8 | 026.0000 | 0199.0 | 080.4 | 52.54 |
| 201.0 | 032.0000 | 0087.7 | 038.9 | 349.4 | 026.0000 | 0199.0 | 080.8 | 52.41 |
| 202.0 | 032.0000 | 0087.5 | 038.8 | 349.0 | 026.0000 | 0199.0 | 081.2 | 52.28 |
| 203.0 | 032.0000 | 0087.3 | 038.8 | 348.6 | 026.0000 | 0199.0 | 081.6 | 52.15 |
| 204.0 | 032.0000 | 0087.1 | 038.8 | 348.2 | 026.0000 | 0199.0 | 082.0 | 52.02 |
| 205.0 | 032.0000 | 0087.2 | 038.8 | 347.8 | 026.0000 | 0199.0 | 082.4 | 51.90 |
| 206.0 | 032.0000 | 0087.2 | 038.8 | 347.5 | 026.0000 | 0199.0 | 082.8 | 51.76 |
| 207.0 | 032.0000 | 0087.3 | 038.8 | 347.1 | 026.0000 | 0199.0 | 083.2 | 51.63 |
| 208.0 | 032.0000 | 0087.6 | 038.8 | 346.7 | 026.0000 | 0199.0 | 083.6 | 51.50 |
| 209.0 | 032.0000 | 0087.9 | 038.9 | 346.4 | 026.0000 | 0199.0 | 084.0 | 51.37 |
| 210.0 | 032.0000 | 0088.3 | 039.0 | 346.0 | 026.0000 | 0199.0 | 084.4 | 51.24 |
| 211.0 | 031.1229 | 0088.7 | 038.8 | 345.8 | 026.0000 | 0199.0 | 085.0 | 51.05 |
| 212.0 | 030.2580 | 0089.1 | 038.7 | 345.5 | 026.0000 | 0199.0 | 085.6 | 50.87 |
| 213.0 | 029.4052 | 0089.7 | 038.6 | 345.3 | 026.0000 | 0199.0 | 086.2 | 50.69 |
| 214.0 | 028.5647 | 0090.7 | 038.5 | 345.0 | 026.0000 | 0199.0 | 086.7 | 50.52 |
| 215.0 | 027.7364 | 0091.7 | 038.5 | 344.7 | 026.0000 | 0199.0 | 087.3 | 50.35 |

# Exhibit 16.4
# Contour Protection Studies Toward WBCL(FM) - Fort Wayne, IN

07-13-2010  USGS 03 SEC Terrain Data

| WBCL BLED20040528AHQ | WYBA |
|---|---|
| Channel = 212B | Channel = 211B |
| Max ERP = 26 kW | Max ERP = 32 kW |
| RCAMSL = 457 M | RCAMSL = 359 M |
| N. Lat. 41 06 13.0 | N. Lat. 42 08 41.0 |
| W. Lng. 85 11 46.0 | W. Lng. 85 12 34.0 |
| 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) |
|---|---|---|---|---|---|---|---|---|---|
| 314.0 | 026.0000 | 0198.9 | 051.4 | 204.2 | 032.0000 | 0087.1 | 087.6 | 46.42 | |
| 315.0 | 026.0000 | 0198.9 | 051.4 | 204.0 | 032.0000 | 0087.1 | 086.8 | 46.63 | |
| 316.0 | 026.0000 | 0198.7 | 051.4 | 203.8 | 032.0000 | 0087.1 | 085.9 | 46.86 | |
| 317.0 | 026.0000 | 0198.5 | 051.3 | 203.5 | 032.0000 | 0087.2 | 085.1 | 47.08 | |
| 318.0 | 026.0000 | 0198.3 | 051.3 | 203.3 | 032.0000 | 0087.2 | 084.3 | 47.30 | |
| 319.0 | 026.0000 | 0198.2 | 051.3 | 203.0 | 032.0000 | 0087.3 | 083.5 | 47.52 | |
| 320.0 | 026.0000 | 0198.0 | 051.3 | 202.7 | 032.0000 | 0087.3 | 082.7 | 47.74 | |
| 321.0 | 026.0000 | 0198.0 | 051.3 | 202.4 | 032.0000 | 0087.4 | 081.9 | 47.96 | |
| 322.0 | 026.0000 | 0198.1 | 051.3 | 202.1 | 032.0000 | 0087.5 | 081.1 | 48.18 | |
| 323.0 | 026.0000 | 0198.3 | 051.3 | 201.8 | 032.0000 | 0087.5 | 080.4 | 48.39 | |
| 324.0 | 026.0000 | 0198.4 | 051.3 | 201.5 | 032.0000 | 0087.6 | 079.6 | 48.60 | |
| 325.0 | 026.0000 | 0198.4 | 051.3 | 201.1 | 032.0000 | 0087.6 | 078.9 | 48.81 | |
| 326.0 | 026.0000 | 0198.7 | 051.3 | 200.7 | 032.0000 | 0087.7 | 078.1 | 49.02 | |
| 327.0 | 026.0000 | 0198.9 | 051.4 | 200.4 | 032.0000 | 0087.8 | 077.4 | 49.23 | |
| 328.0 | 026.0000 | 0199.0 | 051.4 | 200.0 | 032.0000 | 0087.9 | 076.7 | 49.43 | |
| 329.0 | 026.0000 | 0199.0 | 051.4 | 199.5 | 032.0000 | 0088.1 | 076.0 | 49.63 | |
| 330.0 | 026.0000 | 0199.0 | 051.4 | 199.1 | 032.0000 | 0088.3 | 075.3 | 49.83 | |
| 331.0 | 026.0000 | 0199.0 | 051.4 | 198.6 | 032.0000 | 0088.3 | 074.6 | 50.02 | |
| 332.0 | 026.0000 | 0198.9 | 051.4 | 198.2 | 032.0000 | 0088.4 | 073.9 | 50.20 | |
| 333.0 | 026.0000 | 0199.0 | 051.4 | 197.7 | 032.0000 | 0088.5 | 073.3 | 50.39 | |
| 334.0 | 026.0000 | 0199.0 | 051.4 | 197.2 | 032.0000 | 0089.0 | 072.7 | 50.59 | |
| 335.0 | 026.0000 | 0199.0 | 051.4 | 196.6 | 032.0000 | 0089.7 | 072.1 | 50.80 | |
| 336.0 | 026.0000 | 0199.0 | 051.4 | 196.1 | 032.0000 | 0090.3 | 071.5 | 51.00 | |
| 337.0 | 026.0000 | 0199.0 | 051.4 | 195.5 | 032.0000 | 0090.7 | 070.9 | 51.19 | |
| 338.0 | 026.0000 | 0199.0 | 051.4 | 195.0 | 032.0000 | 0090.9 | 070.4 | 51.36 | |
| 339.0 | 026.0000 | 0199.0 | 051.4 | 194.4 | 032.0000 | 0091.1 | 069.9 | 51.53 | |
| 340.0 | 026.0000 | 0199.0 | 051.4 | 193.8 | 032.0000 | 0091.2 | 069.3 | 51.68 | |
| 341.0 | 026.0000 | 0199.0 | 051.4 | 193.1 | 032.0000 | 0091.3 | 068.9 | 51.82 | |
| 342.0 | 026.0000 | 0199.0 | 051.4 | 192.5 | 032.0000 | 0091.4 | 068.4 | 51.96 | |
| 343.0 | 026.0000 | 0199.0 | 051.4 | 191.8 | 032.0000 | 0091.3 | 067.9 | 52.09 | |
| 344.0 | 026.0000 | 0198.9 | 051.4 | 191.2 | 032.0000 | 0091.3 | 067.5 | 52.21 | |
| 345.0 | 026.0000 | 0199.0 | 051.4 | 190.5 | 032.0000 | 0091.3 | 067.1 | 52.32 | |
| 346.0 | 026.0000 | 0199.0 | 051.4 | 189.8 | 032.0000 | 0091.4 | 066.8 | 52.44 | |

# Exhibit 16.4
# Contour Protection Studies Toward WBCL(FM) - Fort Wayne, IN

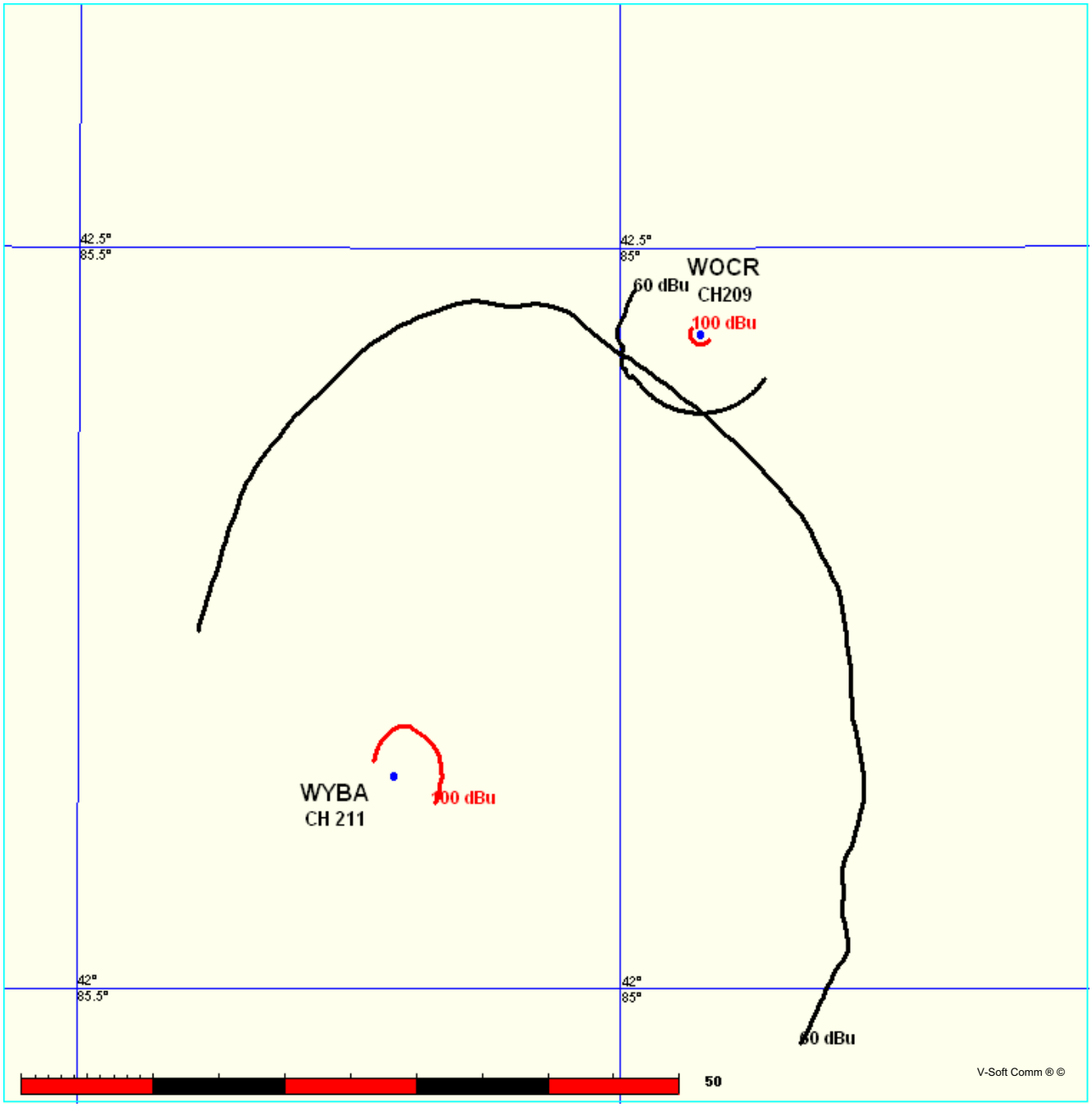
| Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Actual (dBu) |
|---|---|---|---|---|---|---|---|---|
| 347.0 | 026.0000 | 0199.0 | 051.4 | 189.1 | 032.0000 | 0091.2 | 066.4 | 52.53 |
| 348.0 | 026.0000 | 0199.0 | 051.4 | 188.3 | 032.0000 | 0090.8 | 066.1 | 52.60 |
| 349.0 | 026.0000 | 0199.0 | 051.4 | 187.6 | 032.0000 | 0090.2 | 065.8 | 52.65 |
| 350.0 | 026.0000 | 0199.0 | 051.4 | 186.9 | 032.0000 | 0089.7 | 065.5 | 52.70 |
| 351.0 | 026.0000 | 0199.0 | 051.4 | 186.1 | 032.0000 | 0089.3 | 065.3 | 52.75 |
| 352.0 | 026.0000 | 0199.0 | 051.4 | 185.3 | 032.0000 | 0088.7 | 065.0 | 52.78 |
| 353.0 | 026.0000 | 0199.0 | 051.4 | 184.6 | 032.0000 | 0088.2 | 064.8 | 52.80 |
| 354.0 | 026.0000 | 0199.0 | 051.4 | 183.8 | 032.0000 | 0087.7 | 064.7 | 52.82 |
| 355.0 | 026.0000 | 0199.0 | 051.4 | 183.0 | 032.0000 | 0087.4 | 064.5 | 52.84 |
| 356.0 | 026.0000 | 0199.0 | 051.4 | 182.2 | 032.0000 | 0087.4 | 064.4 | 52.87 |
| 357.0 | 026.0000 | 0199.0 | 051.4 | 181.4 | 032.0000 | 0087.3 | 064.4 | 52.89 |
| 358.0 | 026.0000 | 0199.0 | 051.4 | 180.6 | 032.0000 | 0087.2 | 064.3 | 52.89 |
| 359.0 | 026.0000 | 0199.0 | 051.4 | 179.8 | 032.0000 | 0086.9 | 064.3 | 52.88 |
| 000.0 | 026.0000 | 0199.0 | 051.4 | 179.0 | 032.0000 | 0086.7 | 064.3 | 52.87 |
| 001.0 | 026.0000 | 0198.9 | 051.4 | 178.2 | 032.0000 | 0086.6 | 064.3 | 52.86 |
| 002.0 | 026.0000 | 0199.0 | 051.4 | 177.4 | 032.0000 | 0086.6 | 064.4 | 52.84 |
| 003.0 | 026.0000 | 0199.0 | 051.4 | 176.6 | 032.0000 | 0086.5 | 064.4 | 52.81 |
| 004.0 | 026.0000 | 0199.0 | 051.4 | 175.8 | 032.0000 | 0086.5 | 064.6 | 52.78 |
| 005.0 | 026.0000 | 0199.0 | 051.4 | 175.0 | 032.0000 | 0086.7 | 064.7 | 52.75 |
| 006.0 | 026.0000 | 0199.0 | 051.4 | 174.3 | 032.0000 | 0087.0 | 064.9 | 52.72 |
| 007.0 | 026.0000 | 0199.0 | 051.4 | 173.5 | 032.0000 | 0086.9 | 065.1 | 52.65 |
| 008.0 | 026.0000 | 0199.0 | 051.4 | 172.7 | 032.0000 | 0086.2 | 065.3 | 52.54 |
| 009.0 | 026.0000 | 0199.0 | 051.4 | 172.0 | 032.0000 | 0085.0 | 065.5 | 52.39 |
| 010.0 | 026.0000 | 0199.0 | 051.4 | 171.2 | 032.0000 | 0084.3 | 065.8 | 52.27 |
| 011.0 | 026.0000 | 0199.0 | 051.4 | 170.5 | 032.0000 | 0084.1 | 066.1 | 52.17 |
| 012.0 | 026.0000 | 0199.0 | 051.4 | 169.8 | 031.8914 | 0084.2 | 066.4 | 52.06 |
| 013.0 | 026.0000 | 0199.0 | 051.4 | 169.1 | 031.5564 | 0084.1 | 066.8 | 51.91 |
| 014.0 | 026.0000 | 0199.0 | 051.4 | 168.4 | 031.2291 | 0084.0 | 067.2 | 51.75 |
| 015.0 | 026.0000 | 0199.0 | 051.4 | 167.7 | 030.9104 | 0084.0 | 067.6 | 51.59 |
| 016.0 | 026.0000 | 0198.9 | 051.4 | 167.0 | 030.5996 | 0083.9 | 068.0 | 51.42 |
| 017.0 | 026.0000 | 0199.0 | 051.4 | 166.4 | 030.2964 | 0083.7 | 068.4 | 51.24 |
| 018.0 | 026.0000 | 0199.1 | 051.4 | 165.7 | 030.0000 | 0083.5 | 068.9 | 51.06 |
| 019.0 | 026.0000 | 0199.3 | 051.4 | 165.1 | 029.7118 | 0083.3 | 069.4 | 50.87 |
| 020.0 | 026.0000 | 0199.5 | 051.4 | 164.5 | 029.4316 | 0082.8 | 069.9 | 50.66 |
| 021.0 | 026.0000 | 0199.7 | 051.4 | 163.9 | 029.1581 | 0082.2 | 070.4 | 50.44 |
| 022.0 | 026.0000 | 0200.1 | 051.5 | 163.3 | 028.8926 | 0081.7 | 070.9 | 50.22 |
| 023.0 | 026.0000 | 0200.4 | 051.5 | 162.7 | 028.6349 | 0081.3 | 071.5 | 50.00 |
| 024.0 | 026.0000 | 0200.7 | 051.5 | 162.1 | 028.3856 | 0080.9 | 072.0 | 49.79 |
| 025.0 | 026.0000 | 0201.1 | 051.5 | 161.6 | 028.1446 | 0080.5 | 072.6 | 49.56 |
| 026.0 | 026.0000 | 0201.5 | 051.6 | 161.1 | 027.9107 | 0080.1 | 073.2 | 49.34 |
| 027.0 | 026.0000 | 0201.9 | 051.6 | 160.6 | 027.6845 | 0079.7 | 073.8 | 49.11 |
| 028.0 | 026.0000 | 0202.5 | 051.7 | 160.1 | 027.4644 | 0079.2 | 074.5 | 48.88 |
| 029.0 | 026.0000 | 0203.0 | 051.7 | 159.6 | 027.3887 | 0078.8 | 075.1 | 48.67 |
| 030.0 | 026.0000 | 0203.4 | 051.7 | 159.1 | 027.3342 | 0078.6 | 075.8 | 48.47 |
| 031.0 | 026.0000 | 0203.9 | 051.8 | 158.7 | 027.2811 | 0078.6 | 076.5 | 48.27 |
| 032.0 | 026.0000 | 0204.5 | 051.8 | 158.2 | 027.2294 | 0078.7 | 077.2 | 48.08 |
| 033.0 | 026.0000 | 0205.1 | 051.9 | 157.8 | 027.1796 | 0078.9 | 077.9 | 47.90 |

# Exhibit 16.5
# Contour Protection Studies Toward WOCR(FM) - Olivet, MI

FMCommander Single Allocation Study - 07-13-2010 - USGS 03 SEC
WYBA's Overlaps (In= 3.85 km, Out= 30.84 km)

WYBA CH 211 B DA
Lat= 42 08 41.0, Lng= 85 12 34.0
32.0 kW 76.5 M HAAT, 359 M COR
Prot.= 60 dBu, Intef.= 100 dBu

WOCR CH 209 A BLED19890525KD
Lat= 42 26 31.0, Lng= 84 55 30.0
0.125 kW 23 M HAAT, 303 M COR
Prot.= 60 dBu, Intef.= 100 dBu




***Munn-Reese, Inc.***
Broadcast Engineering Consultants
Coldwater, MI 49036

# Exhibit 16.5
# Contour Protection Studies Toward WOCR(FM) - Olivet, MI

07-13-2010 USGS 03 SEC Terrain Data FMOver Analysis

| | |
|---|---|
| WYBA | WOCR BLED19890525KD |
| Channel = 211B | Channel = 209A |
| Max ERP = 32 kW | Max ERP = 0.125 kW |
| RCAMSL = 359 M | RCAMSL = 303 M |
| N. Lat. 42 08 41.0 | N. Lat. 42 26 31.0 |
| W. Lng. 85 12 34.0 | W. Lng. 84 55 30.0 |
| Protected | Interfering |
| 60 dBu | 100 dBu |

| Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Actual (dBu) | IX (km) |
|---|---|---|---|---|---|---|---|---|---|
| 351.0 | 015.8012 | 0070.1 | 029.9 | 262.9 | 000.1250 | 0031.9 | 028.3 | 34.55 | |
| 352.0 | 016.6072 | 0070.3 | 030.2 | 263.7 | 000.1250 | 0032.6 | 027.8 | 35.00 | |
| 353.0 | 017.4333 | 0070.5 | 030.6 | 264.6 | 000.1250 | 0033.1 | 027.3 | 35.43 | |
| 354.0 | 018.2795 | 0071.0 | 031.1 | 265.6 | 000.1250 | 0033.4 | 026.7 | 35.83 | |
| 355.0 | 019.1457 | 0071.5 | 031.5 | 266.6 | 000.1250 | 0034.0 | 026.2 | 36.29 | |
| 356.0 | 020.0319 | 0072.0 | 032.0 | 267.6 | 000.1250 | 0034.2 | 025.7 | 36.70 | |
| 357.0 | 020.9382 | 0072.1 | 032.3 | 268.5 | 000.1250 | 0034.5 | 025.1 | 37.14 | |
| 358.0 | 021.8646 | 0072.1 | 032.7 | 269.2 | 000.1250 | 0034.7 | 024.5 | 37.58 | |
| 359.0 | 022.8110 | 0072.1 | 033.0 | 270.1 | 000.1250 | 0034.6 | 024.0 | 37.93 | |
| 000.0 | 023.7774 | 0072.2 | 033.4 | 271.0 | 000.1250 | 0034.6 | 023.4 | 38.35 | |
| 001.0 | 024.5448 | 0072.5 | 033.7 | 271.8 | 000.1250 | 0034.4 | 022.8 | 38.72 | |
| 002.0 | 025.3244 | 0072.9 | 034.0 | 272.6 | 000.1250 | 0034.4 | 022.2 | 39.18 | |
| 003.0 | 026.1162 | 0073.0 | 034.3 | 273.3 | 000.1250 | 0034.2 | 021.6 | 39.58 | |
| 004.0 | 026.9202 | 0073.2 | 034.6 | 274.1 | 000.1250 | 0033.9 | 021.0 | 39.96 | |
| 005.0 | 027.7364 | 0073.5 | 034.9 | 274.9 | 000.1250 | 0033.6 | 020.4 | 40.38 | |
| 006.0 | 028.5647 | 0073.6 | 035.1 | 275.6 | 000.1250 | 0033.1 | 019.8 | 40.74 | |
| 007.0 | 029.4052 | 0074.1 | 035.5 | 276.6 | 000.1250 | 0032.5 | 019.2 | 41.09 | |
| 008.0 | 030.2580 | 0074.2 | 035.7 | 277.3 | 000.1250 | 0032.4 | 018.6 | 41.56 | |
| 009.0 | 031.1229 | 0074.0 | 035.9 | 277.8 | 000.1250 | 0032.3 | 018.0 | 42.08 | |
| 010.0 | 032.0000 | 0074.0 | 036.1 | 278.6 | 000.1250 | 0032.2 | 017.3 | 42.57 | |
| 011.0 | 032.0000 | 0074.1 | 036.1 | 278.6 | 000.1250 | 0032.2 | 016.7 | 43.10 | |
| 012.0 | 032.0000 | 0074.1 | 036.1 | 278.4 | 000.1250 | 0032.2 | 016.1 | 43.65 | |
| 013.0 | 032.0000 | 0074.4 | 036.2 | 278.4 | 000.1250 | 0032.2 | 015.4 | 44.19 | |
| 014.0 | 032.0000 | 0074.7 | 036.3 | 278.5 | 000.1250 | 0032.2 | 014.8 | 44.76 | |
| 015.0 | 032.0000 | 0075.5 | 036.4 | 278.9 | 000.1250 | 0032.0 | 014.1 | 45.49 | |
| 016.0 | 032.0000 | 0076.9 | 036.7 | 279.9 | 000.1250 | 0031.2 | 013.5 | 46.15 | |
| 017.0 | 032.0000 | 0078.2 | 037.0 | 280.7 | 000.1250 | 0030.7 | 012.8 | 46.96 | |
| 018.0 | 032.0000 | 0078.7 | 037.1 | 280.8 | 000.1250 | 0030.7 | 012.1 | 47.90 | |
| 019.0 | 032.0000 | 0079.2 | 037.2 | 280.9 | 000.1250 | 0030.6 | 011.5 | 48.91 | |
| 020.0 | 032.0000 | 0079.3 | 037.2 | 280.5 | 000.1250 | 0030.8 | 010.8 | 50.00 | |
| 021.0 | 032.0000 | 0079.3 | 037.2 | 279.8 | 000.1250 | 0031.3 | 010.2 | 51.20 | |
| 022.0 | 032.0000 | 0078.6 | 037.1 | 278.1 | 000.1250 | 0032.3 | 009.6 | 52.50 | |
| 023.0 | 032.0000 | 0077.1 | 036.8 | 275.2 | 000.1250 | 0033.4 | 009.1 | 53.74 | |
| 024.0 | 032.0000 | 0076.1 | 036.5 | 272.5 | 000.1250 | 0034.4 | 008.5 | 54.97 | |
| 025.0 | 032.0000 | 0075.2 | 036.4 | 269.5 | 000.1250 | 0034.7 | 008.0 | 56.01 | |

# Exhibit 16.5
# Contour Protection Studies Toward WOCR(FM) - Olivet, MI

| Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Actual (dBu) |
|---|---|---|---|---|---|---|---|---|
| 026.0 | 032.0000 | 0074.6 | 036.2 | 266.6 | 000.1250 | 0034.0 | 007.5 | 56.88 |
| 027.0 | 032.0000 | 0074.0 | 036.1 | 263.2 | 000.1250 | 0032.1 | 007.1 | 57.56 |
| 028.0 | 032.0000 | 0073.7 | 036.0 | 259.5 | 000.1250 | 0030.2 | 006.6 | 58.29 |
| 029.0 | 032.0000 | 0073.5 | 036.0 | 255.6 | 000.1250 | 0032.4 | 006.1 | 60.04 |
| 030.0 | 032.0000 | 0073.5 | 036.0 | 251.2 | 000.1250 | 0033.9 | 005.7 | 61.73 |
| 031.0 | 032.0000 | 0073.4 | 036.0 | 245.8 | 000.1250 | 0034.4 | 005.3 | 62.98 |
| 032.0 | 032.0000 | 0073.2 | 035.9 | 239.7 | 000.1250 | 0034.0 | 005.1 | 63.84 |
| 033.0 | 032.0000 | 0073.0 | 035.9 | 232.9 | 000.1250 | 0024.2 | 004.8 | 63.54 |
| 034.0 | 032.0000 | 0072.9 | 035.9 | 225.5 | 000.1250 | 0022.1 | 004.7 | 63.99 |
| 035.0 | 032.0000 | 0072.8 | 035.9 | 217.9 | 000.1250 | 0019.9 | 004.6 | 64.25 |
| 036.0 | 032.0000 | 0073.0 | 035.9 | 210.1 | 000.1250 | 0019.2 | 004.6 | 64.30 |
| 037.0 | 032.0000 | 0072.6 | 035.8 | 202.8 | 000.1250 | 0018.3 | 004.8 | 63.64 |
| 038.0 | 032.0000 | 0072.4 | 035.8 | 196.1 | 000.1250 | 0021.7 | 005.0 | 62.86 |
| 039.0 | 032.0000 | 0072.6 | 035.8 | 189.6 | 000.1250 | 0017.6 | 005.3 | 62.14 |
| 040.0 | 032.0000 | 0073.1 | 035.9 | 183.4 | 000.1250 | 0015.9 | 005.5 | 61.35 |
| 041.0 | 032.0000 | 0073.4 | 036.0 | 178.1 | 000.1250 | 0015.0 | 005.9 | 60.27 |
| 042.0 | 032.0000 | 0073.3 | 036.0 | 174.1 | 000.1250 | 0015.2 | 006.3 | 58.95 |
| 043.0 | 032.0000 | 0073.1 | 035.9 | 171.0 | 000.1250 | 0016.8 | 006.8 | 57.61 |
| 044.0 | 032.0000 | 0073.0 | 035.9 | 168.1 | 000.1250 | 0016.3 | 007.4 | 56.35 |
| 045.0 | 032.0000 | 0073.2 | 035.9 | 165.3 | 000.1250 | 0015.8 | 007.9 | 55.22 |
| 046.0 | 032.0000 | 0073.6 | 036.0 | 162.7 | 000.1250 | 0016.3 | 008.4 | 54.22 |
| 047.0 | 032.0000 | 0074.0 | 036.1 | 160.4 | 000.1250 | 0016.1 | 008.9 | 53.22 |
| 048.0 | 032.0000 | 0074.1 | 036.1 | 158.8 | 000.1250 | 0015.4 | 009.5 | 52.16 |
| 049.0 | 032.0000 | 0074.1 | 036.1 | 157.6 | 000.1250 | 0014.6 | 010.1 | 51.12 |
| 050.0 | 032.0000 | 0074.3 | 036.2 | 156.3 | 000.1250 | 0014.3 | 010.7 | 50.11 |
| 051.0 | 032.0000 | 0074.5 | 036.2 | 155.3 | 000.1250 | 0014.1 | 011.3 | 49.12 |
| 052.0 | 032.0000 | 0074.7 | 036.3 | 154.3 | 000.1250 | 0014.0 | 011.9 | 48.17 |
| 053.0 | 032.0000 | 0074.9 | 036.3 | 153.6 | 000.1250 | 0014.0 | 012.5 | 47.24 |
| 054.0 | 032.0000 | 0075.1 | 036.3 | 152.9 | 000.1250 | 0013.9 | 013.1 | 46.36 |
| 055.0 | 032.0000 | 0075.4 | 036.4 | 152.2 | 000.1250 | 0013.7 | 013.7 | 45.53 |
| 056.0 | 032.0000 | 0075.7 | 036.5 | 151.7 | 000.1250 | 0013.6 | 014.3 | 44.75 |
| 057.0 | 032.0000 | 0076.0 | 036.5 | 151.2 | 000.1250 | 0013.4 | 015.0 | 44.01 |
| 058.0 | 032.0000 | 0076.3 | 036.6 | 150.9 | 000.1250 | 0013.4 | 015.6 | 43.46 |
| 059.0 | 032.0000 | 0076.3 | 036.6 | 150.8 | 000.1250 | 0013.3 | 016.2 | 42.92 |
| 060.0 | 032.0000 | 0076.2 | 036.6 | 150.8 | 000.1250 | 0013.3 | 016.9 | 42.38 |
| 061.0 | 032.0000 | 0076.0 | 036.5 | 150.9 | 000.1250 | 0013.4 | 017.5 | 41.84 |
| 062.0 | 032.0000 | 0076.0 | 036.5 | 151.0 | 000.1250 | 0013.4 | 018.2 | 41.32 |
| 063.0 | 032.0000 | 0076.0 | 036.5 | 151.1 | 000.1250 | 0013.4 | 018.8 | 40.79 |
| 064.0 | 032.0000 | 0075.8 | 036.5 | 151.2 | 000.1250 | 0013.4 | 019.4 | 40.28 |
| 065.0 | 032.0000 | 0075.9 | 036.5 | 151.3 | 000.1250 | 0013.5 | 020.1 | 39.77 |
| 066.0 | 032.0000 | 0076.0 | 036.5 | 151.3 | 000.1250 | 0013.5 | 020.7 | 39.27 |
| 067.0 | 032.0000 | 0076.3 | 036.6 | 151.3 | 000.1250 | 0013.5 | 021.3 | 38.77 |
| 068.0 | 032.0000 | 0076.1 | 036.6 | 151.6 | 000.1250 | 0013.6 | 022.0 | 38.29 |
| 069.0 | 032.0000 | 0075.6 | 036.4 | 152.1 | 000.1250 | 0013.7 | 022.6 | 37.83 |
| 070.0 | 032.0000 | 0074.8 | 036.3 | 152.7 | 000.1250 | 0013.9 | 023.2 | 37.39 |

# Exhibit 16.5
# Contour Protection Studies Toward WOCR(FM) - Olivet, MI

07-13-2010  USGS 03 SEC Terrain Data

| | |
|---|---|
| WOCR  BLED19890525KD | WYBA |
| Channel = 209A | Channel =  211B |
| Max ERP = 0.125 kW | Max ERP = 32 kW |
| RCAMSL =  303 M | RCAMSL =  359 M |
| N. Lat. 42 26 31.0 | N. Lat. 42 08 41.0 |
| W. Lng. 84 55 30.0 | W. Lng. 85 12 34.0 |
| Protected | Interfering |
| 60  dBu | 100  dBu |

| Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Actual (dBu) | IX (km) |
|---|---|---|---|---|---|---|---|---|---|
| 170.0 | 000.1250 | 0016.7 | 006.0 | 041.9 | 032.0000 | 0073.3 | 036.6 | 61.63 | |
| 171.0 | 000.1250 | 0016.8 | 006.0 | 041.8 | 032.0000 | 0073.4 | 036.5 | 61.67 | |
| 172.0 | 000.1250 | 0016.6 | 006.0 | 041.7 | 032.0000 | 0073.4 | 036.4 | 61.71 | |
| 173.0 | 000.1250 | 0015.7 | 006.0 | 041.5 | 032.0000 | 0073.4 | 036.3 | 61.74 | |
| 174.0 | 000.1250 | 0015.2 | 006.0 | 041.4 | 032.0000 | 0073.4 | 036.3 | 61.78 | |
| 175.0 | 000.1250 | 0015.2 | 006.0 | 041.3 | 032.0000 | 0073.4 | 036.2 | 61.81 | |
| 176.0 | 000.1250 | 0015.1 | 006.0 | 041.2 | 032.0000 | 0073.4 | 036.1 | 61.84 | |
| 177.0 | 000.1250 | 0014.7 | 006.0 | 041.1 | 032.0000 | 0073.4 | 036.0 | 61.87 | |
| 178.0 | 000.1250 | 0015.0 | 006.0 | 041.0 | 032.0000 | 0073.4 | 036.0 | 61.90 | |
| 179.0 | 000.1250 | 0015.4 | 006.0 | 040.9 | 032.0000 | 0073.4 | 035.9 | 61.93 | |
| 180.0 | 000.1250 | 0015.3 | 006.0 | 040.7 | 032.0000 | 0073.4 | 035.8 | 61.96 | |
| 181.0 | 000.1250 | 0015.2 | 006.0 | 040.6 | 032.0000 | 0073.3 | 035.8 | 61.98 | |
| 182.0 | 000.1250 | 0015.4 | 006.0 | 040.5 | 032.0000 | 0073.3 | 035.7 | 62.01 | |
| 183.0 | 000.1250 | 0015.7 | 006.0 | 040.3 | 032.0000 | 0073.3 | 035.6 | 62.03 | |
| 184.0 | 000.1250 | 0016.0 | 006.0 | 040.2 | 032.0000 | 0073.2 | 035.6 | 62.05 | |
| 185.0 | 000.1250 | 0016.0 | 006.0 | 040.1 | 032.0000 | 0073.2 | 035.5 | 62.07 | |
| 186.0 | 000.1250 | 0015.8 | 006.0 | 039.9 | 032.0000 | 0073.1 | 035.4 | 62.09 | |
| 187.0 | 000.1250 | 0015.8 | 006.0 | 039.8 | 032.0000 | 0073.0 | 035.4 | 62.11 | |
| 188.0 | 000.1250 | 0016.4 | 006.0 | 039.7 | 032.0000 | 0073.0 | 035.3 | 62.13 | |
| 189.0 | 000.1250 | 0017.2 | 006.0 | 039.5 | 032.0000 | 0072.9 | 035.3 | 62.14 | |
| 190.0 | 000.1250 | 0017.9 | 006.0 | 039.4 | 032.0000 | 0072.9 | 035.2 | 62.16 | |
| 191.0 | 000.1250 | 0018.2 | 006.0 | 039.2 | 032.0000 | 0072.8 | 035.2 | 62.17 | |
| 192.0 | 000.1250 | 0018.9 | 006.0 | 039.1 | 032.0000 | 0072.7 | 035.1 | 62.18 | |
| 193.0 | 000.1250 | 0019.7 | 006.0 | 038.9 | 032.0000 | 0072.6 | 035.1 | 62.19 | |
| 194.0 | 000.1250 | 0020.4 | 006.0 | 038.8 | 032.0000 | 0072.5 | 035.0 | 62.20 | |
| 195.0 | 000.1250 | 0021.2 | 006.0 | 038.6 | 032.0000 | 0072.5 | 035.0 | 62.21 | |
| 196.0 | 000.1250 | 0021.6 | 006.0 | 038.5 | 032.0000 | 0072.4 | 034.9 | 62.23 | |
| 197.0 | 000.1250 | 0021.9 | 006.0 | 038.3 | 032.0000 | 0072.4 | 034.9 | 62.24 | |
| 198.0 | 000.1250 | 0021.9 | 006.0 | 038.1 | 032.0000 | 0072.4 | 034.9 | 62.25 | |
| 199.0 | 000.1250 | 0021.8 | 006.0 | 038.0 | 032.0000 | 0072.4 | 034.8 | 62.27 | |
| 200.0 | 000.1250 | 0020.6 | 006.0 | 037.8 | 032.0000 | 0072.4 | 034.8 | 62.28 | |
| 201.0 | 000.1250 | 0019.7 | 006.0 | 037.7 | 032.0000 | 0072.4 | 034.8 | 62.30 | |
| 202.0 | 000.1250 | 0018.8 | 006.0 | 037.5 | 032.0000 | 0072.4 | 034.7 | 62.32 | |

# Exhibit 16.5
# Contour Protection Studies Toward WOCR(FM) - Olivet, MI

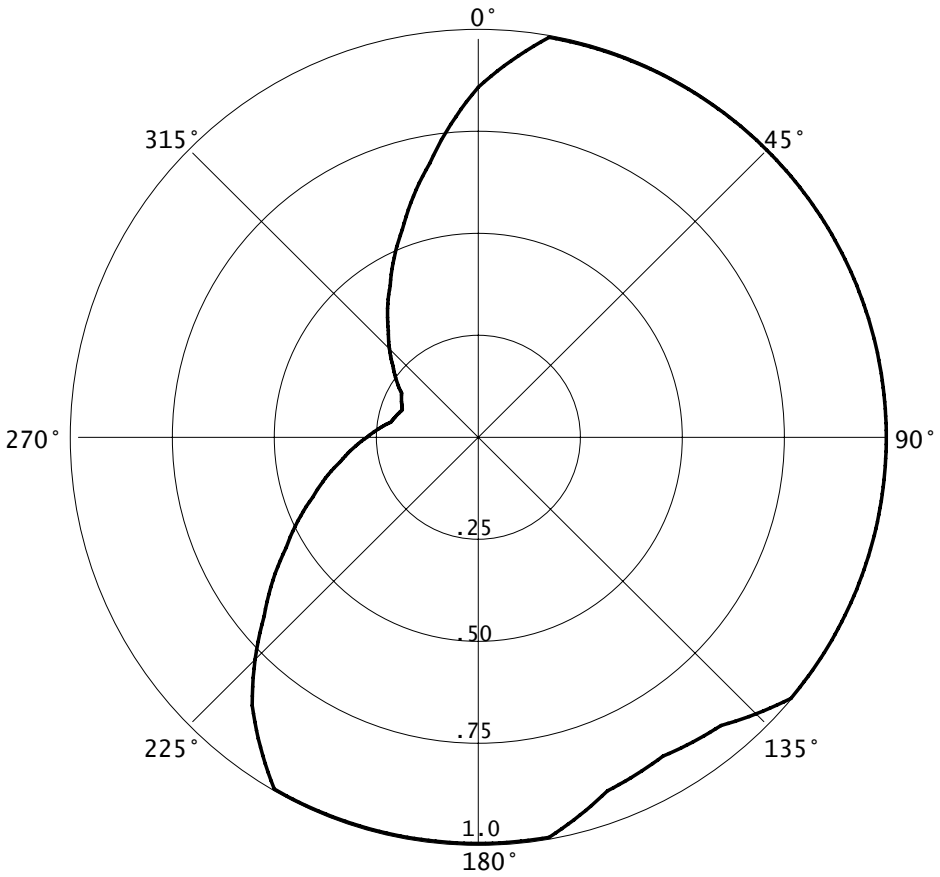
| Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Azimuth (degrees) | ERP (kW) | HAAT (m) | Dist (km) | Actual (dBu) |
|---|---|---|---|---|---|---|---|---|
| 203.0 | 000.1250 | 0018.2 | 006.0 | 037.3 | 032.0000 | 0072.5 | 034.7 | 62.33 |
| 204.0 | 000.1250 | 0018.2 | 006.0 | 037.2 | 032.0000 | 0072.5 | 034.7 | 62.35 |
| 205.0 | 000.1250 | 0018.2 | 006.0 | 037.0 | 032.0000 | 0072.6 | 034.7 | 62.37 |
| 206.0 | 000.1250 | 0018.1 | 006.0 | 036.8 | 032.0000 | 0072.7 | 034.6 | 62.38 |
| 207.0 | 000.1250 | 0018.1 | 006.0 | 036.7 | 032.0000 | 0072.7 | 034.6 | 62.40 |
| 208.0 | 000.1250 | 0018.4 | 006.0 | 036.5 | 032.0000 | 0072.8 | 034.6 | 62.41 |
| 209.0 | 000.1250 | 0018.8 | 006.0 | 036.3 | 032.0000 | 0072.9 | 034.6 | 62.43 |
| 210.0 | 000.1250 | 0019.1 | 006.0 | 036.1 | 032.0000 | 0072.9 | 034.6 | 62.44 |
| 211.0 | 000.1250 | 0019.4 | 006.0 | 036.0 | 032.0000 | 0073.0 | 034.6 | 62.45 |
| 212.0 | 000.1250 | 0019.6 | 006.0 | 035.8 | 032.0000 | 0073.0 | 034.6 | 62.46 |
| 213.0 | 000.1250 | 0019.8 | 006.0 | 035.6 | 032.0000 | 0073.0 | 034.6 | 62.46 |
| 214.0 | 000.1250 | 0019.8 | 006.0 | 035.5 | 032.0000 | 0072.9 | 034.6 | 62.46 |
| 215.0 | 000.1250 | 0019.8 | 006.0 | 035.3 | 032.0000 | 0072.9 | 034.5 | 62.45 |
| 216.0 | 000.1250 | 0019.9 | 006.0 | 035.1 | 032.0000 | 0072.9 | 034.5 | 62.45 |
| 217.0 | 000.1250 | 0019.9 | 006.0 | 034.9 | 032.0000 | 0072.8 | 034.6 | 62.44 |
| 218.0 | 000.1250 | 0019.9 | 006.0 | 034.8 | 032.0000 | 0072.8 | 034.6 | 62.44 |
| 219.0 | 000.1250 | 0019.8 | 006.0 | 034.6 | 032.0000 | 0072.8 | 034.6 | 62.43 |
| 220.0 | 000.1250 | 0020.0 | 006.0 | 034.4 | 032.0000 | 0072.8 | 034.6 | 62.43 |
| 221.0 | 000.1250 | 0020.2 | 006.0 | 034.3 | 032.0000 | 0072.8 | 034.6 | 62.43 |
| 222.0 | 000.1250 | 0020.1 | 006.0 | 034.1 | 032.0000 | 0072.8 | 034.6 | 62.43 |
| 223.0 | 000.1250 | 0019.9 | 006.0 | 033.9 | 032.0000 | 0072.9 | 034.6 | 62.42 |
| 224.0 | 000.1250 | 0020.2 | 006.0 | 033.8 | 032.0000 | 0072.9 | 034.6 | 62.42 |
| 225.0 | 000.1250 | 0021.3 | 006.0 | 033.6 | 032.0000 | 0072.9 | 034.6 | 62.42 |
| 226.0 | 000.1250 | 0022.8 | 006.0 | 033.4 | 032.0000 | 0073.0 | 034.7 | 62.41 |
| 227.0 | 000.1250 | 0024.0 | 006.0 | 033.2 | 032.0000 | 0073.0 | 034.7 | 62.40 |
| 228.0 | 000.1250 | 0024.6 | 006.0 | 033.1 | 032.0000 | 0073.0 | 034.7 | 62.39 |
| 229.0 | 000.1250 | 0024.4 | 006.0 | 032.9 | 032.0000 | 0073.0 | 034.7 | 62.39 |
| 230.0 | 000.1250 | 0024.2 | 006.0 | 032.8 | 032.0000 | 0073.1 | 034.8 | 62.38 |
| 231.0 | 000.1250 | 0023.9 | 006.0 | 032.6 | 032.0000 | 0073.1 | 034.8 | 62.37 |
| 232.0 | 000.1250 | 0024.0 | 006.0 | 032.4 | 032.0000 | 0073.1 | 034.8 | 62.35 |
| 233.0 | 000.1250 | 0024.2 | 006.0 | 032.3 | 032.0000 | 0073.2 | 034.9 | 62.34 |
| 234.0 | 000.1250 | 0024.6 | 006.0 | 032.1 | 032.0000 | 0073.2 | 034.9 | 62.33 |
| 235.0 | 000.1250 | 0025.7 | 006.0 | 032.0 | 032.0000 | 0073.2 | 034.9 | 62.31 |
| 236.0 | 000.1250 | 0026.7 | 006.0 | 031.8 | 032.0000 | 0073.2 | 035.0 | 62.30 |
| 237.0 | 000.1250 | 0028.0 | 006.0 | 031.6 | 032.0000 | 0073.3 | 035.0 | 62.28 |
| 238.0 | 000.1250 | 0031.1 | 006.0 | 031.4 | 032.0000 | 0073.3 | 035.0 | 62.30 |
| 239.0 | 000.1250 | 0033.5 | 006.3 | 031.1 | 032.0000 | 0073.4 | 034.9 | 62.37 |
| 240.0 | 000.1250 | 0034.1 | 006.3 | 030.9 | 032.0000 | 0073.4 | 034.9 | 62.37 |
| 241.0 | 000.1250 | 0034.6 | 006.4 | 030.7 | 032.0000 | 0073.4 | 034.9 | 62.37 |
| 242.0 | 000.1250 | 0034.8 | 006.4 | 030.6 | 032.0000 | 0073.4 | 034.9 | 62.35 |
| 243.0 | 000.1250 | 0034.8 | 006.4 | 030.4 | 032.0000 | 0073.5 | 035.0 | 62.33 |
| 244.0 | 000.1250 | 0034.6 | 006.4 | 030.3 | 032.0000 | 0073.5 | 035.1 | 62.30 |
| 245.0 | 000.1250 | 0034.1 | 006.3 | 030.1 | 032.0000 | 0073.5 | 035.2 | 62.26 |
| 246.0 | 000.1250 | 0034.5 | 006.3 | 030.0 | 032.0000 | 0073.6 | 035.2 | 62.25 |
| 247.0 | 000.1250 | 0035.4 | 006.4 | 029.7 | 032.0000 | 0073.6 | 035.2 | 62.25 |
| 248.0 | 000.1250 | 0035.7 | 006.4 | 029.6 | 032.0000 | 0073.6 | 035.2 | 62.22 |
| 249.0 | 000.1250 | 0035.5 | 006.4 | 029.5 | 032.0000 | 0073.5 | 035.3 | 62.19 |

# Exhibit 16.6
# Tabulation of Proposed DA Pattern

WYBA 07-13-2010 RMS(V)= .823

Graph is Relative Field

| Azi | Field | dBk | kW |
|---|---|---|---|
| 000 | 0.862 | 13.762 | 23.777 |
| 010 | 1.000 | 15.051 | 32.000 |
| 020 | 1.000 | 15.051 | 32.000 |
| 030 | 1.000 | 15.051 | 32.000 |
| 040 | 1.000 | 15.051 | 32.000 |
| 050 | 1.000 | 15.051 | 32.000 |
| 060 | 1.000 | 15.051 | 32.000 |
| 070 | 1.000 | 15.051 | 32.000 |
| 080 | 1.000 | 15.051 | 32.000 |
| 090 | 1.000 | 15.051 | 32.000 |
| 100 | 1.000 | 15.051 | 32.000 |
| 110 | 1.000 | 15.051 | 32.000 |
| 120 | 1.000 | 15.051 | 32.000 |
| 130 | 1.000 | 15.051 | 32.000 |
| 140 | 0.926 | 14.384 | 27.439 |
| 150 | 0.906 | 14.194 | 26.267 |
| 160 | 0.926 | 14.384 | 27.439 |
| 170 | 1.000 | 15.051 | 32.000 |
| 180 | 1.000 | 15.051 | 32.000 |
| 190 | 1.000 | 15.051 | 32.000 |
| 200 | 1.000 | 15.051 | 32.000 |
| 210 | 1.000 | 15.051 | 32.000 |
| 220 | 0.862 | 13.762 | 23.777 |
| 230 | 0.685 | 11.765 | 15.015 |
| 240 | 0.544 | 09.763 | 9.470 |
| 250 | 0.432 | 07.761 | 5.972 |
| 260 | 0.343 | 05.757 | 3.765 |
| 270 | 0.273 | 03.775 | 2.385 |
| 280 | 0.217 | 01.781 | 1.507 |
| 290 | 0.198 | 00.985 | 1.255 |
| 300 | 0.217 | 01.781 | 1.507 |
| 310 | 0.273 | 03.775 | 2.385 |
| 320 | 0.343 | 05.757 | 3.765 |
| 330 | 0.432 | 07.761 | 5.972 |
| 340 | 0.544 | 09.763 | 9.470 |
| 350 | 0.685 | 11.765 | 15.015 |




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.