

Exhibit 13 - FM Channel Study

FM Channel Study Kilgore Broadcast Maintenance

WHBY Xl tr on WHBY NW Tower 250W Dir l

Woodward

REFERENCE 44 08 24.1 N. CH# 292D - 106.3 MHz, Pwr= 0.25 kW DA, HAAT= 82.1 M, COR= 320 M DISPLAY DATES
88 32 49.3 W. Average Protected F(50-50)= 11.71 km DATA 04-29-17
Standard Directional SEARCH 05-17-17

| 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* in km | |
|-------------------------|---------|---------------|-------------------|---------------------------|--------------------------|--------------------|-------------------|-------------------------------------|-------------------------|----------------|----|
| 292D Oshkosh | W246AY | CP WI | 170.0 350.1 | 8.55 BPFT20160729AEP | 44 03 51.1 88 31 42.6 | 0.190 319 | 32.6 | 9.8 Woodward | -35.6* | -41.1* | /1 |
| 289CO Appleton | WAPL | LIC WI | 61.3 241.7 | 50.92 BMLH20050610AGX | 44 21 32.0 87 59 07.0 | 100.000 358 | 11.0 597 | 76.7 Woodward | 29.1 | -26.5* | /2 |
| 292D De Pere | W292DR | LIC WI | 61.3 241.7 | 50.93 BLFT20090227AAN | 44 21 32.0 87 59 06.6 | 0.250 135 | 50.1 378 | 15.2 Woodward | -10.0 | 1.1 | /3 |
| 291D Appleton | W291CM | LIC WI | 43.7 223.8 | 22.83 BLFT20160415AAB | 44 17 18.0 88 20 55.6 | 0.013 | 9.3 342 | 6.7 Educational Media Foundati | 4.3 | 3.7 | |
| 293C1 Marshfield | WYTE | LIC WI | 298.8 117.9 | 117.94 BMLH20131104ABU | 44 38 39.0 89 51 12.0 | 100.000 244 | 100.2 596 | 68.3 Nrg License Sub, LIc | 7.7 | 36.6 | |
| 294C3 Allouez | WKRU | LIC WI | 51.5 232.0 | 61.81 BLH19970102KA | 44 29 03.0 87 56 12.0 | 25.000 100 | 4.6 315 | 43.1 Cumulus Li censi ng LIc | 47.0 | 18.0 | |
| 293A Sheboygan Falls | WHBZ | LIC WI | 125.3 305.9 | 80.03 BLH19970418KB | 43 43 16.0 87 44 03.0 | 6.000 73 | 33.7 279 | 22.4 Midwest Communi cations, In | 34.2 | 39.6 | |
| 291B Waukesha | WML-FM | LIC WI | 155.7 336.2 | 127.07 BLH20070606ABQ | 43 05 46.0 87 54 15.0 | 12.000 304 | 76.3 503 | 65.1 Clear Channel Broadcas | 39.0 | 37.2 | |
| 295A Tigerton | WPAK-FM | LIC WI | 332.2 151.9 | 58.00 BLH20170119AAH | 44 36 03.0 88 53 21.0 | 3.500 132 | 1.5 396 | 17.8 Multi-cultural Diversi ty R | 48.3 | 37.3 | |
| 292A Middleton | WWQM-FM | LIC WI | 212.3 31.7 | 142.79 BMLH20160920ABW | 43 03 03.0 89 29 13.0 | 4.500 114 | 89.4 412 | 31.3 Mid-west Management, Inc. | 41.9 | 72.5 | |
| 292C2 Stephenson | WMXG | LIC MI | 28.5 209.3 | 190.85 BLH19990721KD | 45 38 36.0 87 22 37.0 | 50.000 150 | 138.2 373 | 52.4 Escanaba Li cense Corp. | 44.2 | 111.2 | |

Terrain database is FCC NGDC 30 Sec , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone= East Zone, Co to 3rd adjacent.
All separation margins (if shown) include rounding.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
""affixed to 'IN' or 'OUT' values = site inside restricted contour.
Reference station has protected zone issue: AM tower

/1 This is the subject facility

/2 Please see waiver request on following pages

/3 Please see attached map.

Protected zones report for W246AY.p on channel 292D 05-17-2017

Lat. 44 08 24.1 Lng. 88 32 49.3, ERP= 0.25 kw, HAAT= 82.1 m

Facility is okay with respect to Canada. Distance = 405.4 km.

Closest AM Facility is WHBY, KIMBERLY, WI, L, DA2 at 150.0° at a distance of 0.1 km

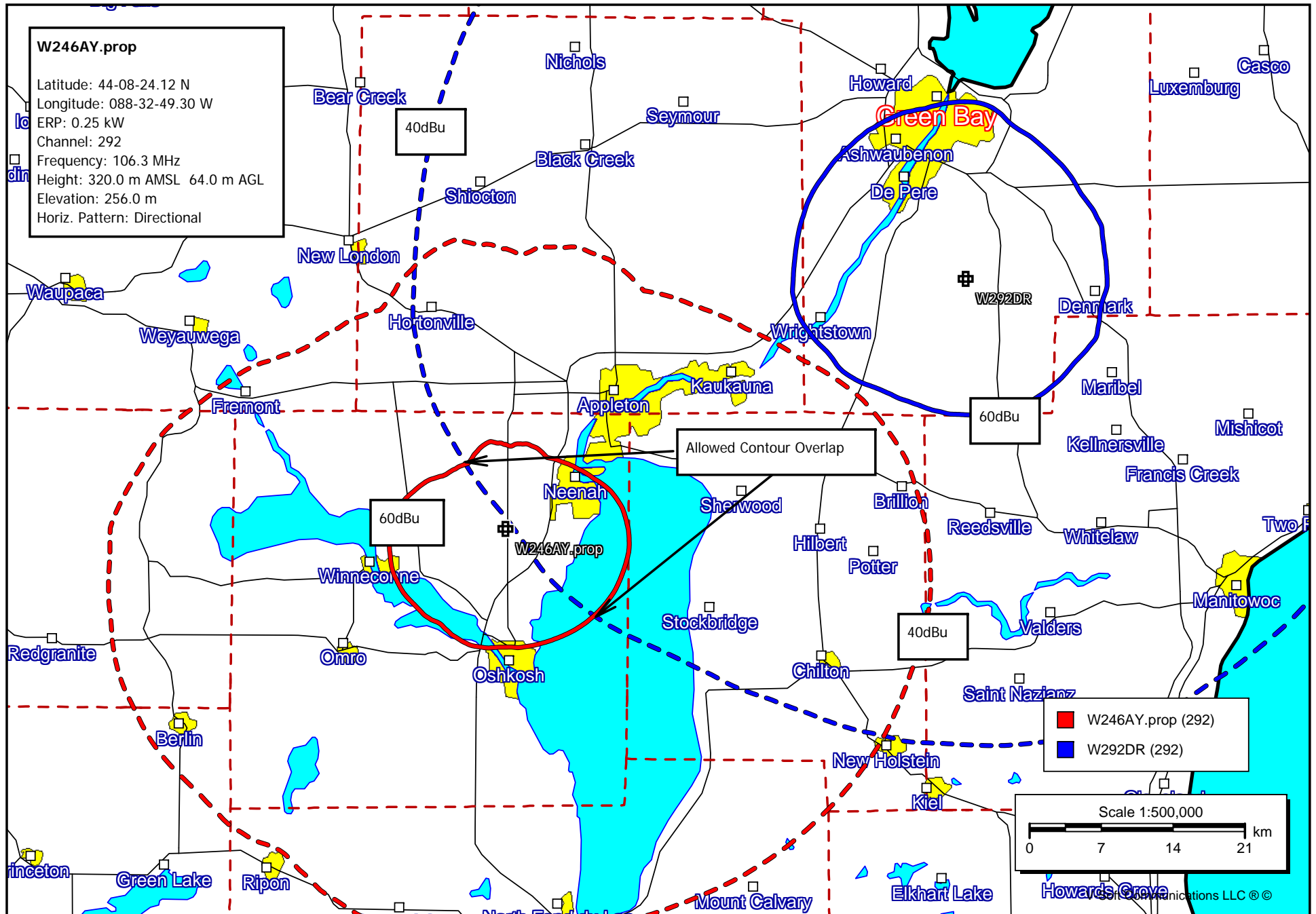
Facility is okay with respect to FCC monitoring stations.

Closest FCC Monitoring Station is 270.5 km= Allegan, MI

Facility is okay toward West Virginia Quiet Zone. Distance to center = 992.4 km

Facility is okay toward Table Mountain. Distance to Center = 1449.9 km,
Azimuth = 257.8 Degrees True

Exhibit 13 - W292DR Contours



Waiver For Compliance with 47 C.F.R. 74.1204

Interference to WAPL

The site for the facility of proposed CP amendment is located within the protected contour of third-adjacent channel station WAPL, channel 289C0, in Appleton, WI, the Protected Station. The predicted contour at the proposed site for this amendment is 71.4 dBu F[50,50]. According to established contour protection ratios, the contour from the interfering station should be 40 dB higher than the protected contour. Therefore the respective potential interfering contour for this proposed amendment is 111.4 dBu F[50,10] (the “Affected Area”).



Figure 1

The antenna is proposed to be located with radiation center 64 meters AGL transmitting 0.250 KW ERP. Applicant proposes to use a PSI antenna model PSIFMT-2A-6DB-75WAVE, which is a two-bay directional antenna with $\frac{3}{4}$ wavelength vertical bay spacing.

The 111.4 dBu directional contour is displayed in **Figure 1**. The directional contour is displayed in red. Within the Affected Area the only structures are the transmitter building and the small buildings at each tower base. There are no other structures where the public might be located within the Affected Area. The only other public location within the Affected Area is a portion of a County Road G, marked within a dashed red box in **Figure 2**. A graphical representation of radiation in the vertical plane at the azimuth of maximum ERP over the public area is displayed on a following page. It shows the interference hovers more than 8 meters above the reference elevation. The ground elevation is approximately 3 meters above the site elevation within that only public portion of the Affected Area. There is also tabular data at the end of this document.



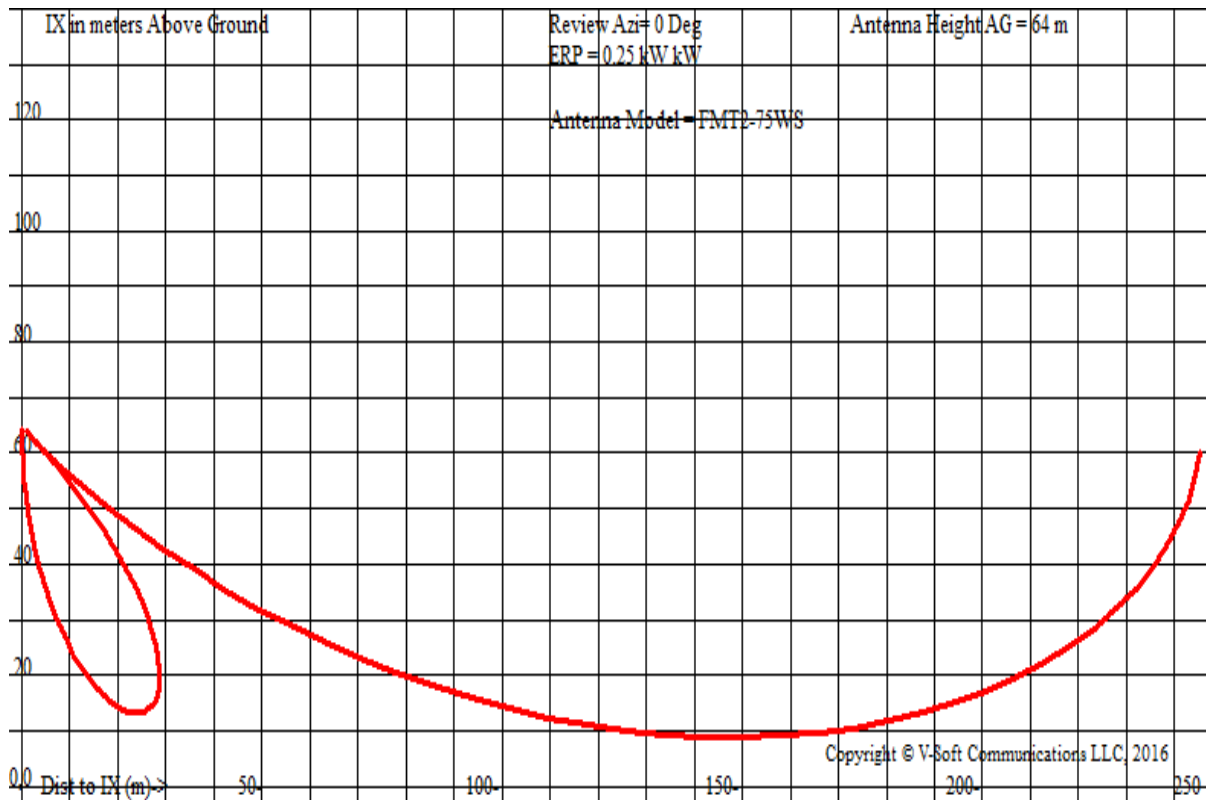
Figure 2

Request for Waiver

No buildings, roads or other structures that the public would normally occupy would put the public within the interference pattern radiated by the antenna.

Since this proposal complies with 47 C.F.R. 74.1204(d) based upon the fact that no actual interference will occur due to no population and no public locations within the areas of interference, we hereby request waiver of 47 C.F.R. 74.1204(a)(3) for separation between this proposed facility and the Protected Station.

Please see the Vertical Radiation Chart and Table on the following page.



W246AY.p ,
 74.1204(d) Showing
 Translator or LPFM Maximum Licensed ERP = 0.25
 Translator or LPFM Antenna Height AG = 64 Meters
 W246AY.p Antenna Model = FMT2-75WS

Protected Station's Contour = 71.36818 dBu
 Translator's or LPFM's full Interference contour 111.36818

Review Azimuth = 0 Degrees True
 Relative Field on the horizon at Review Azimuth = 0.699
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.122 kW
 Distance between stations = 50.9 km
 Protected Station= WAPL, 100 kW, 597 M Meters COR AMSL

| Depression Angle From Horizon(Deg) | Vertical Relative Field | Horizontal Relative Field | ERP (kw) | Dist to IX Contour Along Dep. Angle(m) | Dist to IX Contour From Tower Base(m) | Height IX Above Ground (m) |
|--|-------------------------------|---------------------------------|----------|--|---|----------------------------------|
| 00.0 | 1.0 | 0.7 | 0.1748 | 250.4953 | 250.4953 | 064.000 |
| 01.0 | 0.999 | 0.7 | 0.1744 | 250.2448 | 250.2067 | 059.633 |
| 02.0 | 0.996 | 0.7 | 0.1734 | 249.4933 | 249.3413 | 055.293 |
| 03.0 | 0.991 | 0.7 | 0.1716 | 248.2408 | 247.9006 | 051.008 |
| 04.0 | 0.984 | 0.7 | 0.1692 | 246.4874 | 245.8870 | 046.806 |
| 05.0 | 0.975 | 0.7 | 0.1661 | 244.2329 | 243.3035 | 042.714 |
| 06.0 | 0.964 | 0.7 | 0.1624 | 241.4775 | 240.1546 | 038.759 |
| 07.0 | 0.952 | 0.7 | 0.1584 | 238.4715 | 236.6940 | 034.938 |
| 08.0 | 0.937 | 0.7 | 0.1534 | 234.7141 | 232.4299 | 031.334 |
| 09.0 | 0.921 | 0.7 | 0.1482 | 230.7062 | 227.8658 | 027.910 |
| 10.0 | 0.903 | 0.7 | 0.1425 | 226.1973 | 222.7608 | 024.721 |
| 11.0 | 0.884 | 0.7 | 0.1366 | 221.4379 | 217.3694 | 021.748 |
| 12.0 | 0.863 | 0.7 | 0.1301 | 216.1774 | 211.4534 | 019.054 |
| 13.0 | 0.840 | 0.7 | 0.1233 | 210.4161 | 205.0231 | 016.667 |
| 14.0 | 0.817 | 0.7 | 0.1166 | 204.6547 | 198.5755 | 014.490 |
| 15.0 | 0.792 | 0.7 | 0.1096 | 198.3923 | 191.6322 | 012.652 |
| 16.0 | 0.765 | 0.7 | 0.1023 | 191.6289 | 184.2055 | 011.180 |
| 17.0 | 0.738 | 0.7 | 0.0952 | 184.8655 | 176.7878 | 009.951 |
| 18.0 | 0.710 | 0.7 | 0.0881 | 177.8517 | 169.1470 | 009.041 |
| 19.0 | 0.680 | 0.7 | 0.0808 | 170.3368 | 161.0566 | 008.544 |
| 20.0 | 0.650 | 0.7 | 0.0738 | 162.8219 | 153.0026 | 008.312 |
| 21.0 | 0.620 | 0.7 | 0.0672 | 155.3071 | 144.9917 | 008.343 |
| 22.0 | 0.589 | 0.7 | 0.0606 | 147.5417 | 136.7983 | 008.730 |
| 23.0 | 0.557 | 0.7 | 0.0542 | 139.5259 | 128.4343 | 009.483 |
| 24.0 | 0.525 | 0.7 | 0.0482 | 131.5100 | 120.1404 | 010.510 |
| 25.0 | 0.493 | 0.7 | 0.0425 | 123.4942 | 111.9237 | 011.809 |
| 26.0 | 0.460 | 0.7 | 0.0370 | 115.2278 | 103.5661 | 013.487 |
| 27.0 | 0.428 | 0.7 | 0.0320 | 107.2120 | 095.5266 | 015.327 |

| | | | | | | |
|------|-------|-----|--------|----------|----------|---------|
| 28.0 | 0.395 | 0.7 | 0.0273 | 098.9456 | 087.3638 | 017.548 |
| 29.0 | 0.363 | 0.7 | 0.0230 | 090.9298 | 079.5290 | 019.916 |
| 30.0 | 0.331 | 0.7 | 0.0191 | 082.9139 | 071.8056 | 022.543 |
| 31.0 | 0.299 | 0.7 | 0.0156 | 074.8981 | 064.2002 | 025.425 |
| 32.0 | 0.268 | 0.7 | 0.0126 | 067.1327 | 056.9318 | 028.425 |
| 33.0 | 0.237 | 0.7 | 0.0098 | 059.3674 | 049.7897 | 031.666 |
| 34.0 | 0.207 | 0.7 | 0.0075 | 051.8525 | 042.9877 | 035.004 |
| 35.0 | 0.178 | 0.7 | 0.0055 | 044.5882 | 036.5245 | 038.425 |
| 36.0 | 0.149 | 0.7 | 0.0039 | 037.3238 | 030.1956 | 042.062 |
| 37.0 | 0.121 | 0.7 | 0.0026 | 030.3099 | 024.2066 | 045.759 |
| 38.0 | 0.094 | 0.7 | 0.0015 | 023.5466 | 018.5549 | 049.503 |
| 39.0 | 0.068 | 0.7 | 0.0008 | 017.0337 | 013.2377 | 053.280 |
| 40.0 | 0.043 | 0.7 | 0.0003 | 010.7713 | 008.2513 | 057.076 |
| 41.0 | 0.018 | 0.7 | 0.0001 | 004.5089 | 003.4029 | 061.042 |
| 42.0 | 0.005 | 0.7 | 0.0000 | 001.2525 | 000.9308 | 063.162 |
| 43.0 | 0.027 | 0.7 | 0.0001 | 006.7634 | 004.9464 | 059.387 |
| 44.0 | 0.048 | 0.7 | 0.0004 | 012.0238 | 008.6492 | 055.648 |
| 45.0 | 0.068 | 0.7 | 0.0008 | 017.0337 | 012.0446 | 051.955 |
| 46.0 | 0.086 | 0.7 | 0.0013 | 021.5426 | 014.9647 | 048.504 |
| 47.0 | 0.104 | 0.7 | 0.0019 | 026.0515 | 017.7671 | 044.947 |
| 48.0 | 0.120 | 0.7 | 0.0025 | 030.0594 | 020.1137 | 041.661 |
| 49.0 | 0.135 | 0.7 | 0.0032 | 033.8169 | 022.1859 | 038.478 |
| 50.0 | 0.149 | 0.7 | 0.0039 | 037.3238 | 023.9913 | 035.408 |
| 51.0 | 0.162 | 0.7 | 0.0046 | 040.5802 | 025.5380 | 032.463 |
| 52.0 | 0.174 | 0.7 | 0.0053 | 043.5862 | 026.8343 | 029.654 |
| 53.0 | 0.184 | 0.7 | 0.0059 | 046.0911 | 027.7383 | 027.190 |
| 54.0 | 0.194 | 0.7 | 0.0066 | 048.5961 | 028.5641 | 024.685 |
| 55.0 | 0.202 | 0.7 | 0.0071 | 050.6001 | 029.0230 | 022.551 |
| 56.0 | 0.209 | 0.7 | 0.0076 | 052.3535 | 029.2757 | 020.597 |
| 57.0 | 0.215 | 0.7 | 0.0081 | 053.8565 | 029.3323 | 018.832 |
| 58.0 | 0.220 | 0.7 | 0.0085 | 055.1090 | 029.2033 | 017.265 |
| 59.0 | 0.224 | 0.7 | 0.0088 | 056.1110 | 028.8993 | 015.904 |
| 60.0 | 0.227 | 0.7 | 0.0090 | 056.8624 | 028.4312 | 014.756 |
| 61.0 | 0.228 | 0.7 | 0.0091 | 057.1129 | 027.6889 | 014.048 |
| 62.0 | 0.229 | 0.7 | 0.0092 | 057.3634 | 026.9305 | 013.351 |
| 63.0 | 0.229 | 0.7 | 0.0092 | 057.3634 | 026.0425 | 012.889 |
| 64.0 | 0.228 | 0.7 | 0.0091 | 057.1129 | 025.0367 | 012.667 |
| 65.0 | 0.226 | 0.7 | 0.0089 | 056.6119 | 023.9252 | 012.692 |
| 66.0 | 0.224 | 0.7 | 0.0088 | 056.1110 | 022.8224 | 012.740 |
| 67.0 | 0.220 | 0.7 | 0.0085 | 055.1090 | 021.5328 | 013.272 |
| 68.0 | 0.216 | 0.7 | 0.0082 | 054.1070 | 020.2688 | 013.833 |
| 69.0 | 0.211 | 0.7 | 0.0078 | 052.8545 | 018.9414 | 014.656 |
| 70.0 | 0.205 | 0.7 | 0.0073 | 051.3515 | 017.5633 | 015.745 |
| 71.0 | 0.199 | 0.7 | 0.0069 | 049.8486 | 016.2291 | 016.867 |
| 72.0 | 0.192 | 0.7 | 0.0064 | 048.0951 | 014.8622 | 018.259 |
| 73.0 | 0.184 | 0.7 | 0.0059 | 046.0911 | 013.4757 | 019.923 |
| 74.0 | 0.176 | 0.7 | 0.0054 | 044.0872 | 012.1521 | 021.621 |
| 75.0 | 0.168 | 0.7 | 0.0049 | 042.0832 | 010.8919 | 023.351 |
| 76.0 | 0.159 | 0.7 | 0.0044 | 039.8288 | 009.6354 | 025.354 |
| 77.0 | 0.149 | 0.7 | 0.0039 | 037.3238 | 008.3960 | 027.633 |
| 78.0 | 0.139 | 0.7 | 0.0034 | 034.8188 | 007.2392 | 029.942 |
| 79.0 | 0.129 | 0.7 | 0.0029 | 032.3139 | 006.1658 | 032.280 |
| 80.0 | 0.118 | 0.7 | 0.0024 | 029.5584 | 005.1328 | 034.891 |
| 81.0 | 0.107 | 0.7 | 0.0020 | 026.8030 | 004.1929 | 037.527 |
| 82.0 | 0.096 | 0.7 | 0.0016 | 024.0475 | 003.3468 | 040.186 |
| 83.0 | 0.085 | 0.7 | 0.0013 | 021.2921 | 002.5949 | 042.867 |
| 84.0 | 0.073 | 0.7 | 0.0009 | 018.2862 | 001.9114 | 045.814 |
| 85.0 | 0.061 | 0.7 | 0.0007 | 015.2802 | 001.3318 | 048.778 |
| 86.0 | 0.049 | 0.7 | 0.0004 | 012.2743 | 000.8562 | 051.756 |
| 87.0 | 0.037 | 0.7 | 0.0002 | 009.2683 | 000.4851 | 054.744 |
| 88.0 | 0.025 | 0.7 | 0.0001 | 006.2624 | 000.2186 | 057.741 |
| 89.0 | 0.012 | 0.7 | 0.0000 | 003.0059 | 000.0525 | 060.995 |
| 90.0 | 0.001 | 0.7 | 0.0000 | 000.2505 | 000.0000 | 063.750 |