

Minor Modification of Application

BNPFT-20030317AHY-Facility ID No. 147802

This exhibit is for the Long Form of translator applications BNPFT-20030317AHY-Facility ID No. 147802.

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The proposed antenna is to be co-located with WNCO-FM and W210BG on an existing tower identified by registration number 1015349 at 105 meters above ground, the tower is the antenna for primary standard band stations WNCO Facility ID 2926 Ashland, OH. Below as **Figure 1** is an overlap and spacing study from which it can be determined that this proposal is within the protected contour of **second** adjacent channel station WQIO, and that the protected contour of this proposal encompasses of proposed **second** adjacent translator proposal with facility number 146827.

Concerning second adjacent WQIO; we will demonstrate that a lack of population and/or other factors allow this proposal to be compliant with 74.1204. The process commonly called “Living Way”, allows for the use of D/U Analysis, also known as “signal strength ratio methodology” to be utilized to demonstrate compliance. In this instant case the facility to be protected is on a second adjacent channel and is to be afforded protection from signals 40 dB stronger than the protected facility presents in the location of the proposed translator antenna location.

In **Figure 2** a map showing the predicted 59 dBu signal contour of the protected facility at the proposed translator antenna location is given. This proposal can only cause predicted interference to the protected facility by having a signal exceeding 99 dBu in a habitable/populated area. Utilizing the line of sight equation shown in **Figure 3** which considers the vertical elevation pattern of the proposed antenna, it has been determined that a 99 dBu signal developed by 30 watts, as proposed, emitted by the proposed antenna mounted 105 meters above ground, will not reach ground level. With examination of the image(s) in **Figure 4** it can be determined that no habitable space extends above this height within the confines of this contour. Thus the provisions of the rules section concerning prohibited overlap will not apply as it has been demonstrated that no actual interference will occur due to a lack of population and other factors as applied in this instant proposal.

Concerning second adjacent translator proposal facility number 146827: we will demonstrate that a lack of population and/or other factors allow this proposal to be compliant with 74.1204. The process commonly called “Living Way”, allows for the use of D/U Analysis, also known as “signal strength ratio methodology” to be utilized to demonstrate compliance. In this instant case the facility to be protected is on a second adjacent channel and is to be afforded protection from signals 40 dB stronger than the protected facility presents in the location of the proposed translator antenna location.

In **Figure 2** a map showing the predicted 65.5 dBu signal contour of the protected facility at the proposed translator antenna location is given. This proposal can only cause predicted interference to the protected facility by having a signal exceeding 105.5 dBu in a habitable/populated area. Utilizing the line of sight equation shown in **Figure 5** which considers the vertical elevation pattern of the proposed antenna, it has been determined that a 105.5 dBu signal developed by 30 watts, as proposed, emitted by the proposed antenna mounted 105 meters above ground, will not reach ground level. With examination of the image(s) in **Figure 6** it can be determined that no habitable space extends above this height within the confines of this contour. Thus the provisions of the rules section concerning prohibited overlap will not apply as it has been demonstrated that no actual interference will occur due to a lack of population and other factors as applied in this instant proposal.

RF Radiation Statement

The proposed facilities were evaluated in terms of potential radio frequency radiation exposure at ground level in accordance with OET Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radio frequency Radiation."

The proposed antenna system is a composite **ERI 100A-2 (2) element; full-wave spaced** antenna mounted 105 meters above ground. As this element type is not modeled in any current computer program, for purposes of this analysis the FM Model program has been set to calculate values for a "worst case" type of antenna element array, "Ring Stub", operated with an effective radiated power of 0.030 Kilowatts in the vertical plane. At 2 meters above the surface, at 27.6 meters from the base of the tower, this proposal will contribute worst case, 0.2 microwatts per square centimeter, or 0.02 percent of the allowable ANSI limit for controlled exposure, and 0.1 percent of the allowable limit for uncontrolled exposure. This figure is less than 5.0% of the applicable FCC exposure limit at all locations extending out from the base of the tower. Section 1.1307(b)(3) excludes applications when the calculated level is predicted to be less than 5% of the applicable exposure limit. It is therefore believed that this proposal is in compliance with OET Bulletin Number 65 as required by the Federal Communications Commission.

Further, the applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The site itself is restricted from public access. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

Figure 1. Overlap and Spacing Study for BNPFT-20030317AHY-Facility ID No. 147802

| At ASR 1015349 105m AGL 30 w Capstar TX Limited Partnership Average Protected F(50-50)= 6.21 km Omni-directional | | | | | | | | | | | |
|---|---------|-------|-------|-------|------------------|------------|---------|---------|----------------------------|----------|---------|
| CH | CALL | TYPE | ANT | AZI | DIST | LAT | PWR(kw) | INT(km) | PRO(km) | *IN* | *OUT* |
| CITY | STATE | STATE | STATE | <-- | FILE # | LNG | HAAT(M) | COR(M) | LICENSEE | (Overlap | in km) |
| 227D | 640521 | APP | _C_ | 13.5 | 0.03 | 40 50 26.0 | 0.070 | 26.1 | 7.8 | -35.6* | -39.8* |
| Ashland | OH | OH | | 193.5 | BNPFT20030317AHY | 82 21 26.0 | 67 | 415 | Capstar TX Limited | Partner | |
| 227B | W0DC | LIC | NCX | 206.4 | 119.41 | 39 52 34.0 | 32.000 | 132.0 | 64.4 | -21.8*< | 11.9 |
| Ashville | OH | OH | | 26.0 | BLH20061114ACH | 82 58 49.0 | 184 | 413 | Cc Licenses, Llc | | |
| 229B | WQIO | LIC | _CN | 188.1 | 48.81 | 40 24 18.0 | 37.000 | 5.3 | 60.8 | 33.9 | -12.7*< |
| Mount Vernon | OH | OH | | 8.1 | BLH19870625KB | 82 26 20.0 | 172 | 507 | Bas Broadcasting, Inc. | | |
| 225D | 1559728 | APP | _C_ | 70.6 | 6.93 | 40 51 39.0 | 0.080 | 0.6 | 5.3 | -3.5*< | 1.2 |
| Ashland | OH | OH | | 250.7 | BNPFT20030317LZD | 82 16 47.0 | | 369 | Kent State University | | |
| 227B | AL1345 | RSV-A | _M | 198.5 | 142.64 | 39 37 17.0 | 50.000 | 135.0 | 62.2 | -1.7*< | 36.7 |
| Ashville | OH | OH | | 18.2 | RM9762 | 82 53 13.0 | 150 | 397 | | | |
| 226B | WZAK | LIC | _CN | 51.3 | 78.76 | 41 16 50.0 | 27.500 | 68.7 | 58.3 | 0.4 | 0.2 |
| Cleveland | OH | OH | | 231.8 | BLH4273 | 81 37 22.0 | 189 | 490 | Blue Chip Broadcasting Lic | | |
| 227B | WNCD | LIC | _CN | 78.9 | 146.33 | 41 04 50.0 | 50.000 | 129.9 | 56.3 | 6.7 | 45.0 |
| Youngstown | OH | OH | | 260.0 | BLH19831024AC | 80 38 54.0 | 85 | 413 | Citicasters Licenses, Inc. | | |
| 225D | 1566840 | APP | _C_ | 216.9 | 25.93 | 40 39 12.8 | 0.120 | 0.8 | 5.9 | 16.2 | 19.6 |
| Mansfield | OH | OH | | 36.8 | BNPFT20130814ACN | 82 32 30.4 | | 418 | Spirit Communications, Inc | | |
| 225D | 652132 | APP | _C_ | 216.9 | 25.93 | 40 39 12.8 | 0.120 | 0.8 | 5.9 | 16.2 | 19.6 |
| Mansfield | OH | OH | | 36.8 | BNPFT20030317MQE | 82 32 30.4 | 27 | 418 | Spirit Communications, Inc | | |
| 224A | WQEL | LIC | _CX | 260.2 | 49.34 | 40 45 49.0 | 3.000 | 2.0 | 20.9 | 38.7 | 28.1 |
| Bucyrus | OH | OH | | 79.8 | BLH20060303AAO | 82 56 00.0 | 93 | 402 | Franklin Communications, I | | |
| 227D | W227B3 | LIC | _C_ | 294.0 | 75.66 | 41 06 49.0 | 0.055 | 15.5 | 4.8 | 50.8 | 39.5 |
| Tiffin | OH | OH | | 113.5 | BLFT20051021AFI | 83 10 51.0 | 41 | 275 | Tiffin Broadcasting, LLC | | |
| 224D | W224CD | APP | DV_ | 42.1 | 81.61 | 41 22 58.0 | 0.099 | 0.4 | 12.5 | 71.5 | 68.8 |
| Parma | OH | OH | | 222.5 | BPFT20130417AAN | 81 42 07.0 | | 543 | Educational Media Foundati | | |
| 224D | W224CD | APP | DV_ | 42.1 | 81.61 | 41 22 58.0 | 0.099 | 0.4 | 12.5 | 71.5 | 68.8 |
| Parma | OH | OH | | 222.5 | BPFT20130417AAN | 81 42 07.0 | | 543 | Educational Media Foundati | | |
| 228B1 | WRQN | LIC | NCX | 302.6 | 129.02 | 41 27 28.0 | 7.000 | 48.7 | 37.2 | 71.2 | 76.4 |
| Bowling Green | OH | OH | | 121.8 | BLH20061002BGR | 83 39 33.0 | 121 | 315 | Cumulus Licensing Llc | | |

Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM
Contour distances are on direct line to and from reference station. Reference zone= , 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

Figure 2. Contour Map

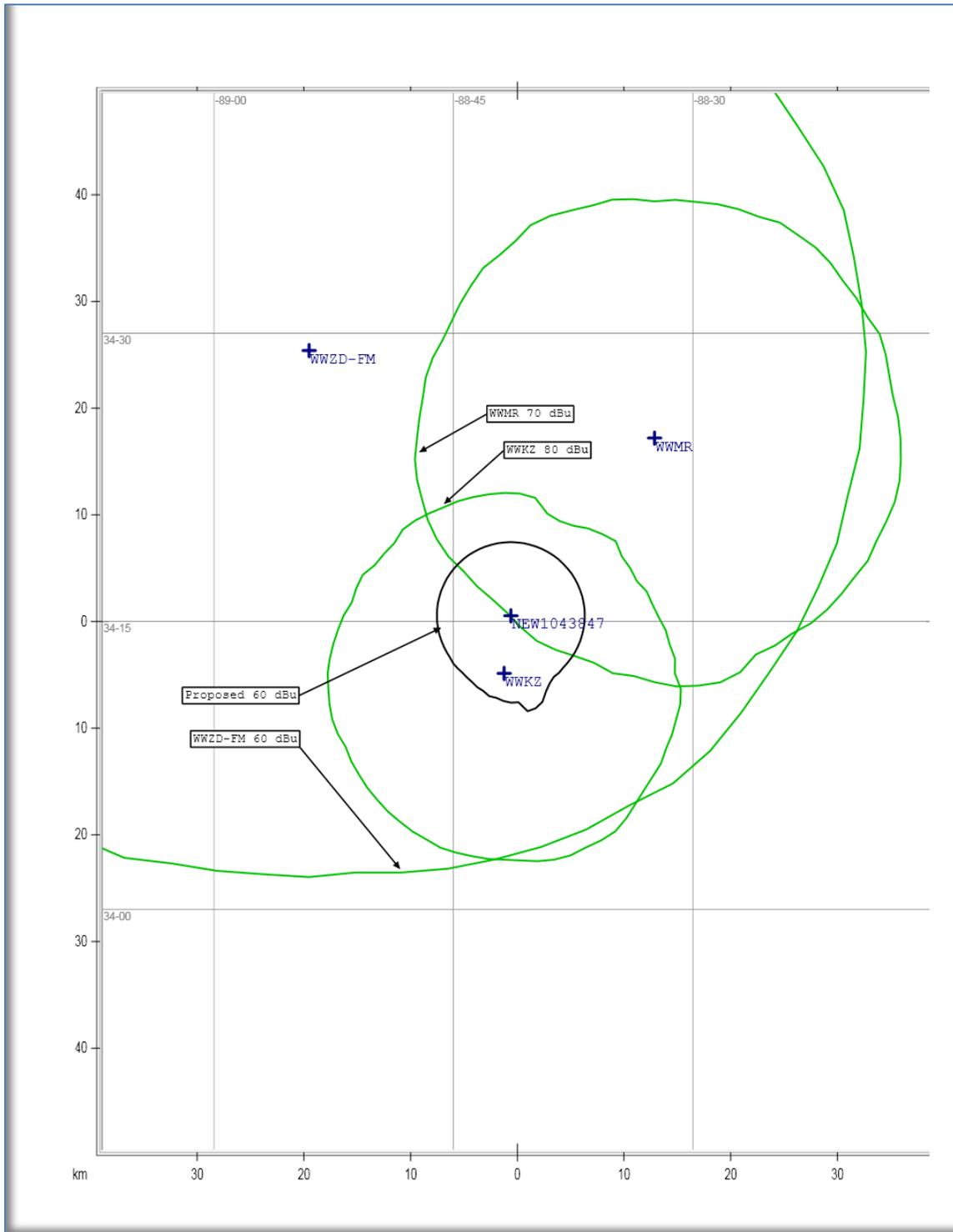


Figure 3. Signal Level at and Near Ground Level

| Proposed Antenna: ERI A 100-2H 2-bay half wave Proposed Power: 0.03 kW Antenna Height AGL: 99 meters Interference Contour: 105.5 dBu f(50:10) Artificial Rcv Antenna Height: 2 meters Distance (Free Space) $= (10^{((106.92 - [\text{desired dBu}] + [\text{ERP in dBk}]) / 20)) * 1000}$ Field Strength (dBu) $= 106.92 - (20 * (\text{LOG}_{10}[\text{DistMeters} / 1000])) + [\text{ERP in dBk}]$ | | | | | | | | |
|--|----------|-------|----------|-----------|------------------|------------------|-----------------|----------------|
| Fill in "yellow" cells | | | | | | | | |
| Depression | | | Distance | | Field Strength | | Distance | |
| Angle | Antenna | | | from Ant. | Distance | in dBu @ | Distance | Field Strength |
| Below | Relative | ERP | ERP | to Interf | from Ant. to | | from Ant. | in dBu @ |
| Horizon | Field | in kW | in dBk | Contour | Artificial Plane | Artificial Plane | to Ground Level | Ground Level |
| 0° | 1.000 | 0.030 | -15.23 | 203.97 m | infinite | --- | infinite | --- |
| -5° | 0.984 | 0.029 | -15.37 | 200.70 m | 1112.95 m | 90.62 dBu | 1135.90 m | 90.44 dBu |
| -10° | 0.938 | 0.026 | -15.78 | 191.32 m | 558.60 m | 96.19 dBu | 570.12 m | 96.02 dBu |
| -15° | 0.865 | 0.022 | -16.49 | 176.43 m | 374.78 m | 98.96 dBu | 382.51 m | 98.78 dBu |
| -20° | 0.772 | 0.018 | -17.48 | 157.46 m | 283.61 m | 100.39 dBu | 289.46 m | 100.21 dBu |
| -25° | 0.665 | 0.013 | -18.77 | 135.64 m | 229.52 m | 100.93 dBu | 234.25 m | 100.75 dBu |
| -30° | 0.553 | 0.009 | -20.37 | 112.79 m | 194.00 m | 100.79 dBu | 198.00 m | 100.61 dBu |
| -35° | 0.442 | 0.006 | -22.32 | 90.15 m | 169.11 m | 100.04 dBu | 172.60 m | 99.86 dBu |
| -40° | 0.339 | 0.003 | -24.62 | 69.14 m | 150.91 m | 98.72 dBu | 154.02 m | 98.54 dBu |
| -45° | 0.248 | 0.002 | -27.34 | 50.58 m | 137.18 m | 96.83 dBu | 140.01 m | 96.66 dBu |
| -50° | 0.172 | 0.001 | -30.52 | 35.08 m | 126.62 m | 94.35 dBu | 129.24 m | 94.17 dBu |
| -55° | 0.112 | 0.000 | -34.24 | 22.84 m | 118.42 m | 91.21 dBu | 120.86 m | 91.03 dBu |
| -60° | 0.068 | 0.000 | -38.58 | 13.87 m | 112.01 m | 87.36 dBu | 114.32 m | 87.18 dBu |
| -65° | 0.037 | 0.000 | -43.86 | 7.55 m | 107.03 m | 82.47 dBu | 109.23 m | 82.29 dBu |
| -70° | 0.018 | 0.000 | -50.12 | 3.67 m | 103.23 m | 76.52 dBu | 105.35 m | 76.34 dBu |
| -75° | 0.007 | 0.000 | -58.33 | 1.43 m | 100.42 m | 68.56 dBu | 102.49 m | 68.38 dBu |
| -80° | 0.002 | 0.000 | -69.21 | 0.41 m | 98.50 m | 57.84 dBu | 100.53 m | 57.67 dBu |
| -85° | 0.001 | 0.000 | -75.23 | 0.20 m | 97.37 m | 51.92 dBu | 99.38 m | 51.75 dBu |
| -90° | 0.001 | 0.000 | -75.23 | 0.20 m | 97.00 m | 51.96 dBu | 99.00 m | 51.78 dBu |

Figure 4. Aerial Image of Area Near Proposed Support Tower



Figure 5. Signal Level at and Near Ground Level

| <p>Proposed Antenna: JAM JLPC-4(0.75)</p> <p>Proposed Power: 0.08 kW</p> <p>Antenna Height AGL: 61 meters</p> <p>Interference Contour: 105.5 dBu</p> <p>Artificial Rcv Antenna Height: 2 meters</p> <p>Distance (Free Space) Equation: $= (10^{(106.92 - [\text{desired dBu}] + [\text{ERP in dBk}]/20)}) * 1000$</p> <p>Field Strength (dBu) Equation: $= 106.92 - (20 * (\text{LOG}10[\text{DistMeters}/1000])) + [\text{ERP in dBk}]$</p> | | | | | | | | |
|---|----------|-------|--------|-----------|------------------|------------------|-----------------|---------------|
| <p>Fill in "yellow" cells</p> | | | | | | | | |
| Depression | | | | Distance | | | | |
| Angle | Antenna | | | from Ant. | Distance | Field Streng | Distance | Field Strengt |
| Below | Relative | ERP | ERP | to Interf | from Ant. to | in dBu @ | from Ant. | in dBu @ |
| Horizon | Field | in kW | in dBk | Contour | Artificial Plane | Artificial Plane | to Ground Level | Ground Level |
| 0° | 1.000 | 0.080 | -10.97 | 333.08 m | infinite | --- | infinite | --- |
| -5° | 0.892 | 0.064 | -11.96 | 297.10 m | 676.95 m | 98.35 dBu | 699.90 m | 98.06 dBu |
| -10° | 0.611 | 0.030 | -15.25 | 203.51 m | 339.77 m | 101.05 dBu | 351.28 m | 100.76 dBu |
| -15° | 0.265 | 0.006 | -22.50 | 88.27 m | 227.96 m | 97.26 dBu | 235.69 m | 96.97 dBu |
| -20° | 0.026 | 0.000 | -42.67 | 8.66 m | 172.50 m | 79.51 dBu | 178.35 m | 79.22 dBu |
| -25° | 0.195 | 0.003 | -25.17 | 64.95 m | 139.61 m | 98.85 dBu | 144.34 m | 98.56 dBu |
| -30° | 0.227 | 0.004 | -23.85 | 75.61 m | 118.00 m | 101.63 dBu | 122.00 m | 101.34 dBu |
| -35° | 0.152 | 0.002 | -27.33 | 50.63 m | 102.86 m | 99.34 dBu | 106.35 m | 99.05 dBu |
| -40° | 0.040 | 0.000 | -38.93 | 13.32 m | 91.79 m | 88.74 dBu | 94.90 m | 88.45 dBu |
| -45° | 0.061 | 0.000 | -35.26 | 20.32 m | 83.44 m | 93.23 dBu | 86.27 m | 92.94 dBu |
| -50° | 0.124 | 0.001 | -29.10 | 41.30 m | 77.02 m | 100.09 dBu | 79.63 m | 99.80 dBu |
| -55° | 0.138 | 0.002 | -28.17 | 45.96 m | 72.03 m | 101.60 dBu | 74.47 m | 101.31 dBu |
| -60° | 0.120 | 0.001 | -29.39 | 39.97 m | 68.13 m | 100.87 dBu | 70.44 m | 100.58 dBu |
| -65° | 0.087 | 0.001 | -32.18 | 28.98 m | 65.10 m | 98.47 dBu | 67.31 m | 98.18 dBu |
| -70° | 0.054 | 0.000 | -36.32 | 17.99 m | 62.79 m | 94.64 dBu | 64.91 m | 94.35 dBu |
| -75° | 0.026 | 0.000 | -42.67 | 8.66 m | 61.08 m | 88.53 dBu | 63.15 m | 88.24 dBu |
| -80° | 0.009 | 0.000 | -51.88 | 3.00 m | 59.91 m | 79.49 dBu | 61.94 m | 79.20 dBu |
| -85° | 0.002 | 0.000 | -64.95 | 0.67 m | 59.23 m | 66.52 dBu | 61.23 m | 66.23 dBu |
| -90° | 0.000 | 0.000 | -90.97 | 0.03 m | 59.00 m | 40.53 dBu | 61.00 m | 40.24 dBu |

Figure 6. Aerial Image of Area Near Proposed Support Tower

