

Channel Study

| REFERENCE | CH# | 248D - 97.5 MHz, Pwr= 0.24 kW, HAAT= 213.8 M, | | COR= 455 M | | DISPLAY DATES | | | | | |
|---------------------|---------|---|-----|------------|------------------|-----------------|-----------------|----------------|----------------------------|---------------|--------------|
| 39 40 06.0 N. | | Average Protected F(50-50)= 18.9 km | | | | DATA 07-30-13 | | | | | |
| 86 01 44.0 W. | | Omni-directional | | | | SEARCH 08-01-13 | | | | | |
| CH CITY | CALL | TYPE STATE | ANT | AZI. <-- | DIST FILE # | LAT. LNG. | Pwr(kW) HAAT(M) | INT(km) COR(M) | PRO(km) LICENSEE | *IN* (Overlap | *OUT* in km) |
| 246B Shelbyville | WLHK | LIC IN | CX | 0.0 | 0.00 | 39 40 06.0 | 23.000 | 5.5 | 63.2 | -23.7*< | -65.1*< |
| | | | IN | 0.0 | BMLH20070501AGZ | 86 01 44.0 | 223 | 463 | Emmis Radio License, Llc | | |
| 248D Indianapolis | W248AW | APP IN | DC | 329.0 | 29.32 | 39 53 40.0 | 0.250 | 66.9 | 22.1 | -56.1* | -50.9 |
| | | | IN | 148.9 | BPFT20130307ABO | 86 12 21.0 | | 519 | Educational Media Foundati | | |
| 248D Franklin | W248AW | LIC IN | C | 191.0 | 17.59 | 39 30 46.0 | 0.035 | 13.7 | 4.3 | -14.8* | -45.2 |
| | | | IN | 11.0 | BLFT20070919ABX | 86 04 05.0 | 40 | 274 | Educational Media Foundati | | |
| 250B Anderson | WGNR-FM | LIC IN | C | 31.8 | 51.54 | 40 03 43.0 | 50.000 | 5.7 | 63.5 | 27.2 | -13.8*< |
| | | | IN | 212.0 | BMLED20030908ADX | 85 42 34.0 | 149 | 405 | The Moody Bible Institute | | |
| 248C1 Louisville | WAMZ | CP KY | CX | 164.9 | 169.68 | 38 11 30.8 | 100.000 | 156.1 | 59.4 | -5.7< | 50.3 |
| | | | KY | 345.2 | BPH20120419AAB | 85 31 21.2 | 169 | 367 | Cc Licenses, Llc | | |
| 248C1 Louisville | WAMZ | LIC KY | CX | 171.7 | 179.97 | 38 03 50.0 | 100.000 | 165.8 | 67.1 | -5.0< | 53.3 |
| | | | KY | 351.9 | BMLH20080402AAP | 85 43 52.0 | 205 | 372 | Cc Licenses, Llc | | |
| 249A Spencer | WCLS | LIC IN | CX | 227.0 | 72.48 | 39 13 22.0 | 6.000 | 43.9 | 28.4 | 10.0 | 16.5 |
| | | | IN | 46.7 | BLH20051110ADE | 86 38 40.0 | 100 | 321 | Mid-america Radio Of India | | |
| 248D Batesville | W248AF | LIC IN | C | 119.8 | 80.48 | 39 18 23.0 | 0.120 | 19.6 | 5.9 | 41.7 | 14.7 |
| | | | IN | 300.3 | BLFT20070518ABA | 85 13 06.0 | 20 | 308 | Good Shepherd Radio, Inc | | |
| 248D Frankfort | 1548797 | APP IN | C | 328.4 | 81.08 | 40 17 19.0 | 0.140 | 20.4 | 6.1 | 42.1 | 16.8 |
| | | | IN | 148.1 | BNPFT20030317GYA | 86 31 48.0 | | 294 | Kaspar Broadcasting Co, In | | |
| 248A Union City | WTGR | LIC OH | ZCN | 60.5 | 120.12 | 40 11 32.0 | 6.000 | 83.6 | 25.8 | 17.8 | 35.7 |
| | | | OH | 241.3 | BLH19941118KA | 84 47 58.0 | 99 | 426 | Positive Radio Group, Inc. | | |
| 248D Crawfordsville | W248BR | CP IN | C | 300.4 | 94.10 | 40 05 31.0 | 0.038 | 22.5 | 6.7 | 52.3 | 27.3 |
| | | | IN | 119.8 | BNPFT20130326AAY | 86 58 54.0 | | 302 | Friends Of Christian Radio | | |
| 251D Greensburg | W251BS | CP IN | C | 130.0 | 60.89 | 39 18 54.0 | 0.055 | 0.5 | 6.4 | 40.7 | 53.4 |
| | | | IN | 310.4 | BNPFT20130328AQT | 85 29 15.0 | | 318 | The Trustees Of Indiana Un | | |
| 248B Champaign | WHMS-FM | LIC IL | CN | 284.4 | 195.38 | 40 05 04.0 | 50.000 | 133.4 | 60.4 | 42.5 | 57.0 |
| | | | IL | 103.0 | BLH19911022KB | 88 14 53.0 | 109 | 328 | D.w.s., Inc. | | |
| 249D Cofax | 1550262 | APP IN | C | 318.7 | 77.97 | 40 11 36.0 | 0.007 | 5.7 | 4.1 | 53.3 | 45.8 |
| | | | IN | 138.3 | BNPFT20030314ATH | 86 38 05.0 | | 326 | Friends Of Christian Radio | | |
| 251D Bloomington | W251AG | LIC IN | DCN | 218.0 | 70.76 | 39 09 56.0 | 0.250 | 0.8 | 5.9 | 51.5 | 63.8 |
| | | | IN | 37.6 | BLFT19960205TA | 86 32 02.0 | 27 | 255 | Bloomington Community Radi | | |
| 248D Delphi | 1564177 | APP IN | C | 322.5 | 122.73 | 40 32 25.0 | 0.027 | 22.2 | 6.7 | 81.7 | 57.3 |
| | | | IN | 141.9 | BNPFT20030314BJJ | 86 54 49.0 | | 263 | Friends Of Christian Radio | | |
| 247D Bedford | W247AY | LIC IN | C | 204.4 | 97.38 | 38 52 08.0 | 0.027 | 8.2 | 5.8 | 70.8 | 64.2 |
| | | | IN | 24.1 | BLFT20060817AEJ | 86 29 36.0 | 64 | 250 | Educational Media Foundati | | |

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= 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 protected contour.
 < = Contour Overlap

Educational Media Foundation

5700 W Oaks Blvd
Rocklin, CA 95765

*Exhibit 13-A
Indianapolis, IN*

Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 54dBu contour of second adjacent channel station WGNR-FM, channel 250B, Anderson, IN. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

| | |
|--|------------|
| The proposed ERP for W248AW.P: | 240 watts |
| The proposed COR for W248AW.P: | 197 meters |
| WGNR-FM F(50/50) contour at proposed site: | 59.6dBu |
| The F(50/10) contour of proposed W248AW.P: | 99.6dBu |

The predicted distance to the 99.6dbu interfering contour is 1137.9 meters. Taking into account the vertical elevation pattern of the SWR three bay antenna utilizing .75 wavelength spacing, and the height above ground of 197M, it has been determined that the interfering contour of 99.6dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 6.305M above ground at an angle of 40 degrees. The distance from the base of the tower at the 40 degree angle is 234M. Exhibit 13-A2 demonstrates the distance of 234M from the base of the tower and the lack of occupied structures that are tall enough to enter into the interfering distance above ground. At an angle of 45 degrees, the distance from the base of the tower is 197M. There are no occupied structures within the 197M distance.

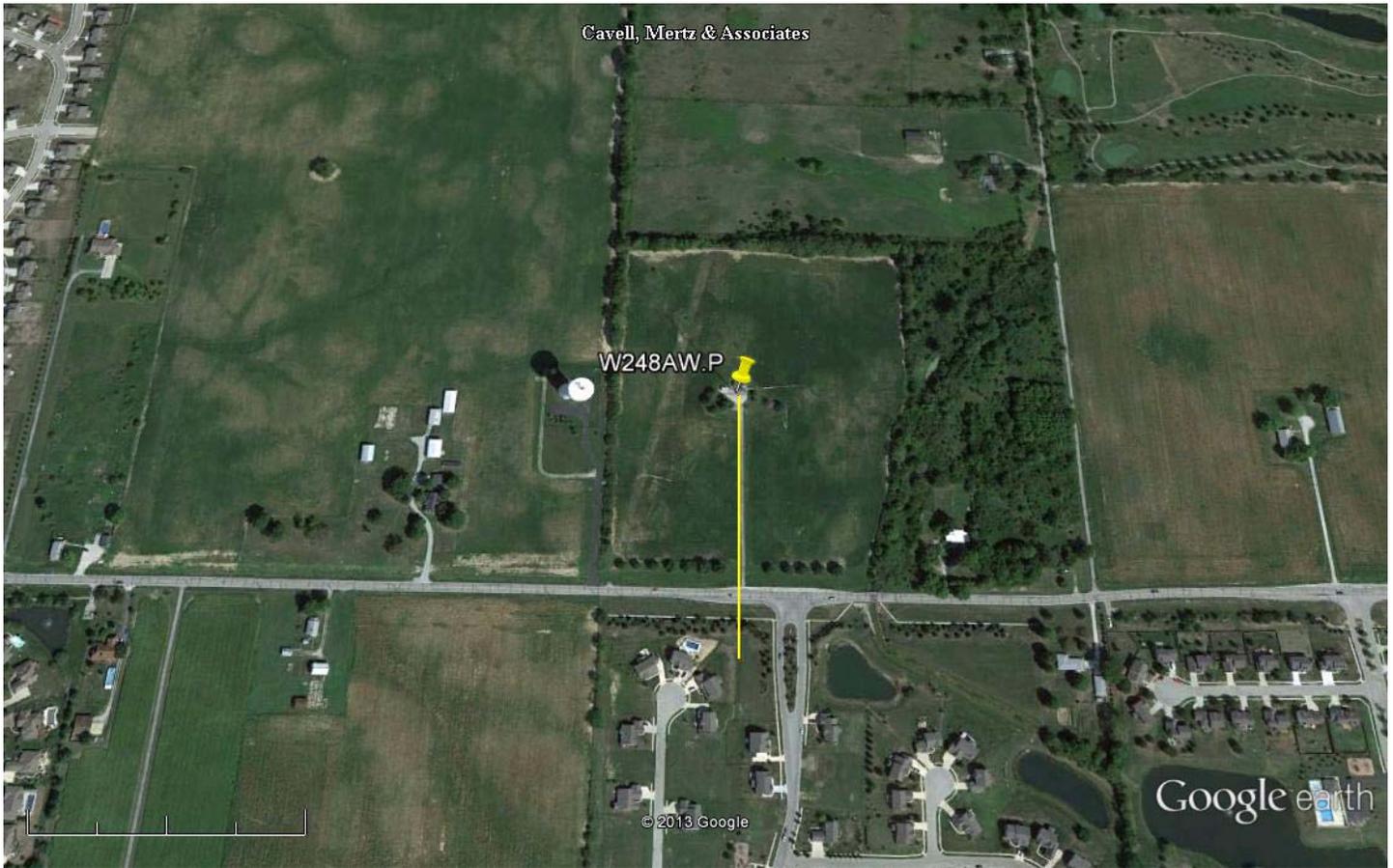
As can be seen in Exhibit 13–A1, all other angles provide ample distances above ground for the interfering contour.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1
 74.1204(d) Showing
 W248AW
 Franklin, IL

ERP (kw): 0.24
 Height of Antenna above Ground (m): 197
 Translator's IX Contour: 99.6
 Antenna Type: SWR 3 bay .75

| <u>Depression Angle from Horizon</u> | <u>Antenna Relative Field</u> | <u>ERP (kw) from the Antenna RF</u> | <u>Dist. To IX Contour (m)</u> | <u>Height IX Contour Above Ground (m)</u> |
|--|-----------------------------------|---|--------------------------------|---|
| 0 | 1.000 | 0.2400 | 1137.9040 | 197.000 |
| 5 | 0.941 | 0.2125 | 1070.7677 | 103.676 |
| 10 | 0.778 | 0.1453 | 885.2893 | 43.271 |
| 15 | 0.545 | 0.0713 | 620.1577 | 36.491 |
| 20 | 0.289 | 0.0200 | 328.8543 | 84.525 |
| 25 | 0.056 | 0.0008 | 63.7226 | 170.070 |
| 30 | 0.121 | 0.0035 | 137.6864 | 128.157 |
| 35 | 0.226 | 0.0123 | 257.1663 | 49.495 |
| 40 | 0.260 | 0.0162 | 295.8550 | 6.828 |
| 45 | 0.237 | 0.0135 | 269.6832 | 6.305 |
| 50 | 0.177 | 0.0075 | 201.4090 | 42.712 |
| 55 | 0.104 | 0.0026 | 118.3420 | 100.060 |
| 60 | 0.033 | 0.0003 | 37.5508 | 164.480 |
| 65 | 0.023 | 0.0001 | 26.1718 | 173.280 |
| 70 | 0.060 | 0.0009 | 68.2742 | 132.843 |
| 75 | 0.075 | 0.0014 | 85.3428 | 114.565 |
| 80 | 0.073 | 0.0013 | 83.0670 | 115.195 |
| 85 | 0.057 | 0.0008 | 64.8605 | 132.386 |
| 90 | 0.033 | 0.0003 | 37.5508 | 159.449 |



Google earth

feet
meters



Yellow Pin:

NAD27 39 40' 06" N 86 01' 44" W

Yellow Line: 234M at 180 degree true

Educational Media Foundation

5700 W Oaks Blvd
Rocklin, CA 95765

*Exhibit 13-A
Indianapolis, IN*

Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 60dBu contour of second adjacent channel station WLHK, channel 246B, Shelbyville, IN. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

| | |
|--|------------|
| The proposed ERP for W248AWP: | 240 watts |
| The proposed COR for W248AW.P: | 197 meters |
| WLHK F(50/50) contour at proposed site: | 162dBu |
| The F(50/10) contour of proposed New 630069.P: | 202dBu |

The proposed W248AW antenna will be located 8 meters below the WLHK antenna. The signal level at the proposed antenna level from the WLHK antenna is 162dbu. The predicted distance to the 202dbu interfering contour is 0 meters, therefore there is no interference level to take into account.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.