

Channel Study

| REFERENCE | | CH# 225D - 92.9 MHz, Pwr= 0.099 kW, HAAT= 236.1 M, COR= 504 M | | | | | | | | DISPLAY DATES | |
|---|---------|---|--------------|----------------|---------------------------|--------------------------|----------------------|---------------------|------------------------------------|-------------------------|----------|
| 44 58 36.0 N. | | Average Protected F(50-50)= 15.8 km | | | | | | | | DATA | 05-13-13 |
| 93 16 15.0 W. | | Omni-directional | | | | | | | | SEARCH | 05-13-13 |
| CH CITY | CALL | TYPE | ANT STATE | AZI. <-- | DIST FILE # | LAT. LNG. | Pwr (kW) HAAT (M) | INT (km) COR (M) | PRO (km) LICENSEE | *IN* (Overlap in km) | *OUT* |
| 225D St. Paul | W225AP | CP | C MN | 0.0 0.0 | 0.00 BPFT20110915ACR | 44 58 36.0 93 16 15.0 | 0.099 | 52.5 504 | 16.1 Educational Media Foundati | -68.7* | -68.7* |
| 223C Golden Valley | KQRS-FM | LIC | CN MN | 51.7 231.8 | 14.67 BLH19910814KB | 45 03 30.0 93 07 27.0 | 100.000 315 | 10.4 593 | 73.9 Radio License Holding Iii, | -11.0* | -59.9* |
| 225D St. Paul | W225AP | LIC | C MN | 92.2 272.4 | 17.58 BLFT20070730ABV | 44 58 13.0 93 02 51.0 | 0.170 4 | 30.4 283 | 6.4 Educational Media Foundati | -28.1* | -41.0 |
| 225C3 St. Joseph | KKJM | LIC | CN MN | 310.9 130.1 | 113.33 BLH19960510KA | 45 38 19.0 94 22 23.0 | 25.000 100 | 117.4 448 | 42.2 Gabriel Media | -19.7* | 20.0 |
| 227D Shoreview | W227BF | LIC | V MN | 240.6 60.6 | 0.12 BLFT20130412ABJ | 44 58 34.0 93 16 20.0 | 0.099 | 0.7 504 | 15.3 Educational Media Foundati | -15.9* | -15.9* |
| 226C1 New Ulm | KATO-FM | LIC | CN MN | 217.9 37.3 | 118.98 BLH19890117KG | 44 07 44.0 94 11 15.0 | 100.000 149 | 88.4 440 | 58.7 Minnesota Valley Broadcast | 14.9 | 36.4 |
| 225A Rochester | KFSI | LIC | CN MN | 151.2 331.7 | 120.59 BLED19810507AJ | 44 01 27.0 92 32 36.0 | 6.000 97 | 86.3 443 | 27.5 Faith Sound, Inc. | 18.0 | 38.1 |
| 225A Elk Mound | WECL | LIC | CN WI | 93.8 275.0 | 133.13 BLH19920720KI | 44 53 04.0 91 35 04.0 | 3.300 136 | 83.7 424 | 28.4 Maverick Media Of Eau Clai | 33.6 | 52.6 |
| 225C1 Duluth | WSCD-FM | LIC | C MN | 23.5 204.3 | 220.35 BMLED19940823KA | 46 47 20.0 92 07 04.0 | 70.000 185 | 163.7 492 | 69.2 Minnesota Public Radio | 41.3 | 100.8 |
| ----- | | | | | | | | | | | |
| Terrain database is 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= West 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. | | | | | | | | | | | |

Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 60 dBu contour of second adjacent channel station KQRS-FM, channel 223C, Golden Valley, MN. 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 W225AP: | 250 watts |
| The proposed COR for W225AP: | 17 meters* |
| KQRS-FM F(50/50) contour at proposed site: | 94 dBu |
| The F(50/10) contour of proposed W225AP | 134 dBu |

By taking into account the antenna vertical elevation pattern for the NIC BKG 77, it has been determined that the predicted interfering contour will not actually reach the ground or any regularly occupied floors of the building (see Exhibit 13 A-1). The maximum distance to the interference contour is 22.1 meters.

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

* NOTE: The architectural specification sheet for this site states that this is a 57 floor building with floors 56 and 57 housing equipment only; each floor is approximately 4.14 meters tall. The roof of the building is topped by a 5 meter parapet. The proposed antenna will be mounted on a 4 meter pole atop the parapet placing the proposed antenna approximately 17 meters above the regularly occupied portion of the building.

EXHIBIT 13 - A1
74.1204(d) Showing
W225AP
ST. PAUL, MN

ERP (kw): 0.25
Height of Antenna above Ground (m): 17
Translator's IX Contour: 134
Antenna Type: Nicom BKG77

| Depression Angle from Horizon | Antenna Relative Field | ERP (kw) from the Antenna RF | Dist. To IX Contour (m) | Height IX Contour Above Ground (m) |
|--|-----------------------------------|---|--------------------------------|---|
| 0 | 1.000 | 0.2500 | 22.1294 | 17.000 |
| 5 | 0.999 | 0.2495 | 22.1073 | 15.073 |
| 10 | 0.982 | 0.2411 | 21.7311 | 13.226 |
| 15 | 0.954 | 0.2275 | 21.1115 | 11.536 |
| 20 | 0.918 | 0.2107 | 20.3148 | 10.052 |
| 25 | 0.872 | 0.1901 | 19.2969 | 8.845 |
| 30 | 0.818 | 0.1671 | 18.0908 | 7.955 |
| 35 | 0.758 | 0.1436 | 16.7741 | 7.379 |
| 40 | 0.691 | 0.1194 | 15.2914 | 7.171 |
| 45 | 0.616 | 0.0949 | 13.6317 | 7.361 |
| 50 | 0.538 | 0.0724 | 11.9056 | 7.880 |
| 55 | 0.465 | 0.0541 | 10.2902 | 8.571 |
| 60 | 0.391 | 0.0382 | 8.6526 | 9.507 |
| 65 | 0.313 | 0.0245 | 6.9265 | 10.722 |
| 70 | 0.239 | 0.0143 | 5.2889 | 12.030 |
| 75 | 0.176 | 0.0077 | 3.8948 | 13.238 |
| 80 | 0.129 | 0.0042 | 2.8547 | 14.189 |
| 85 | 0.103 | 0.0027 | 2.2793 | 14.729 |
| 90 | 0.001 | 0.0000 | 0.0221 | 16.978 |

Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 60 dBu contour of second adjacent channel station W227BF, channel 227CD Shoreview, MN. 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 W225AP: | 250 watts |
| The proposed COR for W225AP: | 17 meters* |
| W227BF F(50/50) contour at proposed site: | 114.9 dBu |
| The F(50/10) contour of proposed W225AP | 154.9 dBu |

By taking into account the antenna vertical elevation pattern for the NIC BKG 77, it has been determined that the predicted interfering contour will not actually reach the ground or any regularly occupied floors of the building (see Exhibit 13 B-1). The maximum distance to the interference contour is 1.9 meters.

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

* NOTE: The architectural specification sheet for this site states that this is a 57 floor building with floors 56 and 57 housing equipment only; each floor is approximately 4.14 meters tall. The roof of the building is topped by a 5 meter parapet. The proposed antenna will be mounted on a 4 meter pole atop the parapet placing the proposed antenna approximately 17 meters above the regularly occupied portion of the building.

EXHIBIT 13 - B1
74.1204(d) Showing
W225AP
ST. PAUL, MN

ERP (kw): 0.25
Height of Antenna above Ground (m): 17
Translator's IX Contour: 154.9
Antenna Type: Nicom BKG77

| Depression Angle from Horizon | Antenna Relative Field | ERP (kw) from the Antenna RF | Dist. To IX Contour (m) | Height IX Contour Above Ground (m) |
|--|-----------------------------------|---|--------------------------------|---|
| 0 | 1.000 | 0.2500 | 1.9951 | 17.000 |
| 5 | 0.999 | 0.2495 | 1.9931 | 16.826 |
| 10 | 0.982 | 0.2411 | 1.9592 | 16.660 |
| 15 | 0.954 | 0.2275 | 1.9033 | 16.507 |
| 20 | 0.918 | 0.2107 | 1.8315 | 16.374 |
| 25 | 0.872 | 0.1901 | 1.7397 | 16.265 |
| 30 | 0.818 | 0.1671 | 1.6310 | 16.184 |
| 35 | 0.758 | 0.1436 | 1.5123 | 16.133 |
| 40 | 0.691 | 0.1194 | 1.3786 | 16.114 |
| 45 | 0.616 | 0.0949 | 1.2290 | 16.131 |
| 50 | 0.538 | 0.0724 | 1.0734 | 16.178 |
| 55 | 0.465 | 0.0541 | 0.9277 | 16.240 |
| 60 | 0.391 | 0.0382 | 0.7801 | 16.324 |
| 65 | 0.313 | 0.0245 | 0.6245 | 16.434 |
| 70 | 0.239 | 0.0143 | 0.4768 | 16.552 |
| 75 | 0.176 | 0.0077 | 0.3511 | 16.661 |
| 80 | 0.129 | 0.0042 | 0.2574 | 16.747 |
| 85 | 0.103 | 0.0027 | 0.2055 | 16.795 |
| 90 | 0.001 | 0.0000 | 0.0020 | 16.998 |