



**RF RADIATION CALCULATIONS
IN ACCORDANCE WITH OET BULLETIN 65**

TOWER COORDINATES: 44°-59'-54"; 93°-11'-18"

**KUOM(AM) TOWER SITE
FALCON HEIGHTS, MINNESOTA**

July, 2009

Station	Freq. (MHz)	ERP (KW) Circularly- Polarized	Ant. Ht. AGL (m)	Antenna Model	Power Density* (mW/cm ²)	Prediction Method Used	% FCC Public Exposure Max.
New Xlator (BNPFT20030317LMK)	98.9	0.062	150	Unknown	.00019	Pg. 22, Eq. 9 OET Bulletin 65	0.09
WFMP Auxiliary	107.1	8	132	ERI 4-bay	.00274	FMMModel	1.37
KBEM-FM	88.5	2.9	114	ERI 4-bay	.00134	FMMModel	0.67
W264BR	100.7	0.01	91	Unknown	.00008	Pg. 22, Eq. 9 OET Bulletin 65	0.04
KNOF (Prop)	95.3	3.3	103	Type 2 3-bay	.00336	FMMModel	1.68
TOTAL							3.85

*Calculated 2 meters above ground

In addition to the above, the tower itself is the radiating antenna of AM station KUOM, 770 KHz in Minneapolis, operating at 5 KW. The tower is a quarter-wave radiator (0.25 wavelength). The distance from the tower to the nearest fence is 3.66 meters (12 feet). From Figure 4 of Supplement A of OET Bulletin 65, the predicted E- and H-fields are as follows:

$$E = 40.7 \text{ V/m}; H = 0.496 \text{ A/m}$$

Calculating the power density,

$$S = (E \times H)/10 = 2.02 \text{ mW/cm}^2$$

The public exposure limit for a radiator in the 0.3 to 1.34 MHz range is 100 mW/cm². Thus, the percentage of the FCC maximum public exposure due to KUOM is 2.02%. Adding this to the total percentage due to the FM operations in the above table, the total percentage of maximum public exposure for all stations including KUOM is **5.87%**.