

## Technical Exhibits in Support of RF Radiation Compliance for WMKL

### **Rf Radiation Compliance**

The Federal Communications Commissions Rules (47. C.F.R. Section 1.1306) require that an addition to any multiple use site must not contribute non-ionizing RF Radiation in excess of the total limits for each class of service in either of the two selected environments as specified in OST Bulletin #65.

WMKL-FM (CP) is proposed to operate at 50 kW with its antenna located at 91 meters above ground level. A 4-bay Shively 6810 Series antenna is proposed. As such, WMKL would contribute a maximum of 0.031 microwatts per square centimeter at 2 meters above ground level, which occurs at 40 meters from the base of the tower. Thus, this amount is 3.1% of the controlled environment and 15.5% of the uncontrolled environment limit.

WGES-FM (Proposed) is proposed to operate at 33 kW with its antenna located at 91 meters above ground level. A 4-bay Shively 6810 Series antenna is proposed. As such, WGES would contribute a maximum of 0.021 microwatts per square centimeter at 2 meters above ground level, which occurs at 40 meters from the base of the tower. Thus, this amount is 2.1% of the controlled environment and 10.5% of the uncontrolled environment limit.

W228AY operates at 0.027 kW with its antenna located at 91 meters above ground level. W228AY contributes a maximum of 0.00013 microwatts per square centimeter at 2 meters above ground level, which occurs at 48 meters from the base of the tower. Thus, this amount is 0.013% of the controlled environment and 0.065% of the uncontrolled environment limit.

Thus, considering all current and proposed facilities operating from the proposed site, the total radiation in the controlled environment will be 5.2% of the ANSI limit while the total radiation in the uncontrolled environment will be 26.1% of the ANSI limit which occurs at 40 meters from the base of the tower. This tower is fenced both at the base and within a much larger fence around the property (approximately 100 meters from the tower) where the tower is located. Therefore, this proposal is fully compliant with the provisions of OST Bulletin #65 as recently amended.

The contributions of these facilities were calculated using FM-Model from OET. The EPA Dipole antenna (worst case) was used for W228AY. However, in the cases of WMKL and WGES, the Shively 6800 Series 4-bay model was used.