

Analysis of Non-Ionizing Radiation from KORE, KKNX, and KLZS Co-location

KORE, KKNX, and KLZS are proposing triplexing into the common KKNX AM vertical radiator. KORE is a 5 kW daytime station on 1050 kHz. KKNX is a 1 kW daytime facility on 840 kHz. KLZS is a 1 kW daytime facility on 1450 kHz. These facilities will all have different electrical length radiators due to their frequency differences. A worst case analysis was performed using the Tables from OET Bulletin 65a.

The sum of the maximum powers is 7 kW from all triplexed facilities. Table 3 of Section 1, AM Radio Broadcast Stations has the most prohibitive limits on the distance required from the tower to protect the general public. That Table is attached to this analysis. Using linear interpolation and a power of 7 kW gives a distance of 2.4 meters from the base of the tower as satisfactory. Other tables, with the exception of Table 1 for 0.1 wavelength towers, are less restrictive. A measurement of the fence surrounding the tower shows the nearest point to the base of the tower at a distance of 2.48 meters. Thus the present fence is sufficient to protect the general public from the non-ionizing radiation from the combination of these three facilities. A further study based on the actual electrical heights of the tower for the various triplexed stations showed that some limits were nearer the tower than that value. None were greater.

The stations will be turned off or powers severely reduced below a combined power of 100 Watts for workers climbing or working within the fenced area.

Other than the addition of KORE and the required triplex tuning and filter device there will be no physical changes to the site or tower.