

**Comprehensive Engineering Exhibit  
Minor Change Application  
KQLL-FM, Owasso, Oklahoma**

By this application it is sought to relocate the antenna of KQLL-FM and change via the “one-step” procedure the stations class from C to C1.

The class of KQLL-FM can be changed to C1 with no change in allocation location, as a C1 facility is fully spaced from that location, and would provide the requisite coverage of the principal community of Owasso, Oklahoma. It is proposed to locate the antenna 409 meters above ground level on a tower identified by registration number 1048930. From that height and location the height above average terrain will exceed the class maximum by 163 meters. The web tool “FM Power” was utilized to determine that 32 kW is the equivalent maximum effective radiated power.

This proposed location will be spaced to all allocations, applications, and facilities in accordance with 73.207, with the exceptions of; an application for 290A in Haileyville, Oklahoma, stations KIRC, KIXO and KKBI, all to which spacing in accordance with Section 73.215 is requested. Figure 1 is a demonstration that the requested directional antenna will prevent prohibited contour overlap with these facilities and application.

The proposed facilities were evaluated in terms of potential radio frequency radiation exposure at ground level in accordance with OET Bulletin No. 65, “Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radio frequency Radiation.”

The proposed antenna system is an EPA type 3, 8- bay, full wave spaced, “Roto- tiller “ antenna, mounted with its center of radiation 409 meters above ground level, and will operate with an effective radiated power of 32 Kilowatts in both the horizontal and vertical planes. At 2 meters above ground, at 110 meters from the base of the tower, this proposal will contribute worst case, 0.75 microwatts per square centimeter, or .075 percent of the allowable ANSI limit for controlled exposure, and 0.4 percent of the allowable limit for uncontrolled exposure. This figure is less than 5% of the applicable FCC exposure limit at all locations extending out from the base of the tower. Section 1.1307(b)(3) excludes applications when the calculated level is predicted to be less than 5% of the applicable exposure limit. It is therefore believed that this proposal is in compliance with OET Bulletin Number 65 as required by the Federal Communications Commission.

Further, the applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The site itself is restricted from public access. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

Figure 1.

