

Comprehensive Engineering Exhibit  
KNFX-FM Facility ID 41410  
Minor Change Application  
February 8, 2007

By this application it is sought to modify the facility of KNFX-FM to specify a new antenna height and location.

The proposed KNFX-FM antenna is to be non-directional and will be located 71 meters above ground level upon an existing tower atop a building roof. This location is described in antenna structure registration number 1255847. This is the present location of the KNFX-FM Auxiliary antenna BLXH-20061206AEQ<sup>1</sup>.

This location is approximately 2.61 km from directional standard band station KZNE. During the construction of the KNFX-FM Auxiliary facility, the licensee worked closely with KZNE. This application will require only the replacement of the existing FM antenna for one with additional gain. The roof mounted 15.2 meter support tower will not be modified in any way, nor will the transmission line be modified materially, thus it is anticipated that this work will have no affect upon KZNE.

From this location KNFX-FM is fully spaced as a Class A facility in accordance with Section 73.207 to all known facilities, applications and allocations with the exception of KPLX Fort Worth, Texas. Spacing in accordance with Section 73.215 is requested with KPLX. To prevent prohibited contour overlap, the antenna of KNFX-FM will be limited. Attached as Figure 1 is a map demonstrating that no prohibited contour overlap will exist.

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, 5- bay, half wave spaced, "Roto- tiller " antenna, mounted with its center of radiation 12.1 meters above roof level, 71 meters above ground and will operate with an effective radiated power of 6 Kilowatts in both the horizontal and vertical planes. At 49 meters from the base of the antenna, this proposal will contribute worst case, 64.6 microwatts per square centimeter, or 6.46 percent of the allowable ANSI limit for controlled exposure, and 32.3 percent of the allowable limit for uncontrolled exposure. This area of maximum intensity will occur not above the building, but, 60 meters above ground level beyond the perimeter of the building. The highest signal anticipated to occur in an accessible area, is 2 meters above the roof surface, 13.7 meters from the tower base where 51.9 microwatts per square centimeter is predicted. This is 5.19 percent of the allowable ANSI limit for controlled exposure, and 25.9 percent of the allowable limit for uncontrolled exposure. It is therefore believed

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<sup>1</sup> During the preparation of this application, needed corrections were discovered in BLXH-20061206 AEQ which will be filed via separate action.

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 roof 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

