

**MINOR CHANGE APPLICATION**  
**LEGEND COMMUNICATIONS OF WYOMING, LLC**  
**KKLX (FM) RADIO STATION**  
**CH 241C1 - 96.1 MHZ - 63.0 KW**  
**WORLAND, WYOMING**  
**August 2011**

**EXHIBIT B**

**Radio Frequency Assessment**

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. §1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997 ("Bulletin"), regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. As the proposed KKLX antenna is being mounted on a relatively short tower with another FM facility, it was not possible to use the worksheets to verify that the proposed KKLX facility is in compliance with the Commission's radio frequency exposure limits. This study considers all nearby stations, specifically the permitted KYTS, and utilizes the appropriate formulas contained in the OET Bulletin.<sup>1</sup>

The KKLX antenna system will be mounted with its center of radiation 80.2 meters (263.0 feet) above the ground at the tower location and will operate with an effective radiated power of 63.0 kilowatts in the horizontal and vertical planes (circularly polarized). The proposed KKLX antenna is to be an Electronics Research, Inc., rototiller style eight bay, full wavelength spaced antenna (FCC/EPA Type #3). At 2.0 meters above the ground at the base of the tower, the height of an average person, the KKLX antenna system will contribute  $0.0401 \text{ mw/cm}^2$ .<sup>2</sup>

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- 1) The contributions of the FM facilities were calculated using the FMModel program. A single bay EPA dipole antenna was used for calculation purposes. In cases where the number of bays of the antenna was known, this data was used in the FMModel program.
  - 2) This level of field occurs at 21.0 meters out from the base of the tower and is considered worst case.

Based on exposure limitations for a controlled environment, 4.0% of the allowable limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 20.1% of the allowable limit is reached at 2.0 meters above the ground at the base of the tower.

The authorized KYTS antenna system will be mounted with its center of radiation 54.9 meters (180.0 feet) above the ground at the tower location and will operate with an effective radiated power of 75.0 kilowatts in the horizontal and vertical planes (circularly polarized). The proposed KYTS antenna is to be an Electronics Research, Inc., rototiller style eight bay, full wavelength antenna system (FCC/EPA Type #3). At 2.0 meters above the ground at the base of the tower, the height of an average person, the KYTS antenna system will contribute 0.1043 mw/cm<sup>2</sup>.<sup>3</sup> Based on exposure limitations for a controlled environment, 10.4% of the allowable limit is reached at 2.0 meters above the ground at the base of the tower. For uncontrolled environments, 52.2% of the allowable limit is reached at 2.0 meters above the ground at the base of the tower.

Combining the contributions of KKLX and KYTS, a total of 72.3% of the limit for an uncontrolled environments is reached at 2.0 meters above the ground at the base of the tower. Since this contribution level is less than the ANSI limits, it is believed the proposed KKLX facility is in compliance with the radio frequency radiation exposure limits, as required by the Federal Communications Commission. Legend will also insure that warning signs have been posted in the vicinity of the tower warning of potential radio frequency radiation hazards at the

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3) This level of field occurs at 14.0 meters out from the base of the tower and is considered worst case.

site. In addition, Legend will reduce the power of the facility or cease operation in cooperation and coordination with other tower users, as necessary, to protect persons having access to the site, tower, or antenna from radio frequency radiation in excess of FCC guidelines.