

**MINOR CHANGE APPLICATION**  
**RAPID BROADCASTING COMPANY**  
**KAUN-DT TELEVISION STATION**  
**CH 51 - 200.0 KW**  
**SIOUX FALLS, SOUTH DAKOTA**  
**June 2001**

**EXHIBIT B**

**Radio Frequency and Environmental 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. This study considers all nearby stations and utilizes the appropriate formulas contained in the Bulletin.

**Environmental Analysis**

The existing tower on which the KAUN-DT antenna is to be located does not involve the use of high intensity white lighting (strobes) in a residential neighborhood. The structure is not located in an officially designated wilderness area or wildlife preserve, nor does it threaten the existence or habitat of endangered species. The facility does not affect districts, sites, buildings, structures or objects significant in American history, architecture, archaeology, engineering or culture that are listed in the National Register of Historic Places, or are eligible for listing, nor does it affect Indian religious sites. Further, the site is not located in a flood plain and did not, to the knowledge of the applicant, require significant change in surface features (wetland fill, deforestation or water diversion) at the time of construction.

## **Radio Frequency Radiation Study**

This radio frequency radiation study is being conducted to determine whether this proposal is in compliance with OET Bulletin Number 65, dated August 1997, regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. This study considers all nearby contributing stations, specifically co-located analog TV station KAUN, and utilizes the appropriate formulas contained in the OET Bulletin.

The KAUN- DT Channel 51 antenna system will be mounted with its center of radiation 224.6 meters (737.0 feet) above the ground at the existing tower location and operate with an effective radiated power of 200.0 kilowatts in the horizontal polarized plane. At two meters, the height of an average person, above the ground at the base of the tower, the KAUN-DT antenna system will contribute 0.0836 mw. Based on exposure limitations for a controlled environment, 3.6% of the allowable ANSI limit is reached at two meters above the ground at the base of the tower. For uncontrolled environments, 18.1% of the ANSI limit is reached at two meters above the ground at the base of the tower.

The KAUN Channel 36 antenna system is mounted with its center of radiation 246.3 meters (808.1 feet) above the ground at the existing tower location and operates with an effective radiated power of 2,650.0 kilowatts in the horizontal polarized plane. As denoted in OET Bulletin #65, Supplement A, Page 31, the typical UHF antenna system has a downward radiation field of 0.1. As such, the KAUN antenna system radio frequency radiation calculations were made based on an effective radiated power of 26.5 kilowatts. At two meters, the height of an average person, above the ground at the base of the tower, the KAUN antenna system

contributes 0.0092 mw. Based on exposure limitations for a controlled environment, 0.5% of the allowable ANSI limit is reached at two meters above the ground at the base of the tower. For uncontrolled environments, 2.3% of the ANSI limit is reached at two meters above the ground at the base of the tower.

Combining the contributions of KAUN-DT and KAUN, a total of 20.4% of the limit is reached at two meters above the ground at the base of the tower. Since this level for uncontrolled environments is below the 100% limit defined by the Commission, the proposed KAUN-DT facility is believed to be in compliance with the radio frequency radiation exposure limits as required by the Federal Communications Commission. Further, Rapid Broadcasting Company ( Rapid ) will insure that warning signs in the vicinity of the tower warning of potential radio frequency radiation hazards at the site. In addition, Rapid will reduce the power of the proposed 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. Based on the above factors, this proposal is categorically excluded from environmental processing pursuant to §1.1306 of the Commission's rule