

# EXHIBIT 17-A

## Human Exposure to Radiofrequency Electromagnetic Field & Section 106 Compliance (Environmental)

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, regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. Lutheran Church-Missouri Synod seeks a new FM translator at St. Louis, MO. The FM translator will simulcast co-owned Class B AM primary station KFUE 850 kHz, Facility ID No. 39258, Clayton, MO and proposes operation on Channel 224D (92.7 MHz).. The tower is located at 38° 41' 07" N ~ 90° 22' 54" W (NAD 27). The tower is 103.6 meters in overall height and is registered with the FCC's Antenna Registration Structure ("ASR") number 1272657. The antenna is a side mounted Kathrein-Scala CL-FM two antenna array with a center of radiation of 82 meters AGL and 107 meters HAAT. The new FM translator will operate with 99 watts ERP directional with vertical polarization. The two antennas will be oriented at 23 degrees and 301 degrees true azimuth. The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of § 1.1306 of the FCC Rules. Because the proposed new facility proposes to operate from an existing tower and no changes are being made to the structure, it is believed to be exempt from a Section 106 review by the SHPO/THPO.

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission's OET Bulletin Number 65. The Kathrein-Scala CL-FM antenna is not included in the recently revised OET FM Model Program. Therefore the study was done using EPA Type 1, "Ring and Stub" or other. Using the Type 1 antenna, the maximum calculated signal density near the tower at two meters above ground level attributable to the proposed facility is  $0.493 \mu\text{W}/\text{cm}^2$  at 18.4 meters, which is 0.247 percent of the general population/uncontrolled maximum permitted exposure limit. This is well below the five percent threshold limit described in 1.1307(b) regarding sites with multiple emitters, which excludes applicant from responsibility for taking any corrective action in areas where the proposal's contribution is less than five percent.

The applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. 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.