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ENVIRONMENTAL AND RADIO FREQUENCY SAFETY

The licensee of KBSI is committed to the protection of station personnel and/or tower contractors working in the vicinity of the KBSI antenna, and is committed to reducing power or ceasing operation during times of maintenance of the transmission systems, when necessary, to ensure protection to personnel.

The predicted emissions of KBSI must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For KBSI, which will operate on television Channel 36 (602-608 MHZ), the MPE is 403.3 microwatts per centimeter squared ($\mu W/cm^2$) in an "uncontrolled" environment and 2,016.7 $\mu W/cm^2$ in a "controlled" environment. The proposed KBSI facility will operate with a maximum ERP of 1000 kW from an elliptically polarized directional transmitting antenna with a centerline height of 468.6 meters above ground level (AGL). Considering a conservative predicted vertical plane relative field factor of 0.300 the KBSI facility is predicted to produce a power density at two meters above ground level of 27.62 $\mu W/cm^2$, which is 6.85% of the FCC guideline value for an "uncontrolled" environment, and 1.37% of the FCC's guideline value for "controlled" environments. There is one FM station also located at the KBSI site. The total estimated percentage of the ANSI value at the proposed site, including the cumulative radiation from all authorizations located within the relevant proximity, is 77.80% of the limit applicable to "uncontrolled" environments, and 15.56% of the limit for "controlled" environments. (See Appendix A)

SUMMARY OF RADIOFREQUENCY
RADIATION STUDY
KBSI, Cape Girardeau, MO
Channel 36, 1000 kW,543 m HAAT
June, 2017

CALL	SERVICE	CHANNEL	FREQUENCY	POLAR-IZATION	ANTENNA HEIGHT	ERP (kW)	VERT. RELATIVE FIELD FACTOR	WORST-CASE PREDICTED POWER DENSITY (μW/cm²)	FCC UNCONTROLLED LIMIT (μW/cm²)	PERCENT OF UNCONTROLLED LIMIT
KBSI	DT	36	605	H & V	468.6	1000.000	0.300	27.622	403.33	6.85%
KEZS-FM	FM	275	102.9	H & V	219	100.000	1.000	141.901	200.00	70.95%

TOTAL PERCENTAGE OF FCC GUIDELINE VALUE = 77.80%

** For television stations a very conservative vertical relative field factor of 0.3 was assumed pursuant to OET Bulletin 65.*

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