



ENVIRONMENTAL AND RADIO FREQUENCY SAFETY

The licensee of KXVO is committed to the protection of station personnel and/or tower contractors working in the vicinity of the KXVO 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 KXVO must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For KXVO, which will operate on television Channel 29 (560-566 MHz), the MPE is 375.33 microwatts per centimeter squared ($\mu\text{W}/\text{cm}^2$) in an “uncontrolled” environment and $1,876.7 \mu\text{W}/\text{cm}^2$ in a “controlled” environment. The proposed KXVO facility will operate with a maximum ERP of 825 kW from a horizontally polarized omni-directional transmitting antenna with a centerline height of 452.3 meters above ground level (AGL). Considering a conservative predicted vertical plane relative field factor of 0.300 the KXVO facility is predicted to produce a power density at two meters above ground level of $12.23 \mu\text{W}/\text{cm}^2$, which is 3.26% of the FCC guideline value for an “uncontrolled” environment, and 0.652% of the FCC’s guideline value for “controlled” environments. There is one other full-power DTV facility, three LPTV DTV facilities and one FM radio station that are located at the KXVO 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 19.35% of the limit applicable to “uncontrolled” environments, and 3.87% of the limit for “controlled” environments. (See Appendix A)

**SUMMARY OF RADIOFREQUENCY
RADIATION STUDY**

KXVO, Omaha, Nebraska

CHANNEL 29, 825 kW ERP, 475 m HAAT

October, 2017

<u>CALL</u>	<u>SERVICE</u>	<u>CHANNEL</u>	<u>FREQUENCY</u>	<u>POLARIZATION</u>	<u>ANTENNA HEIGHT ** mAGL</u>	<u>ERP (kW)</u>	<u>VERT. RELATIVE FIELD FACTOR</u>	<u>PREDICTED POWER DENSITY (mW/cm²)</u>	<u>FCC UNCONTROLLED LIMIT (mW/cm²)</u>	<u>PERCENT OF UNCONTROLLED LIMIT</u>
KVSS	FM	274	102.7	H & V	385.1	46.100	1.000	0.02077	0.200	10.39%
KBLI-LD	DT	31	575	H & V	148	2.000	0.300	0.00055	0.383	0.14%
KAJS-LD	DT	32	581	H & V	148	15.000	0.300	0.00412	0.387	1.06%
KQLD-LD	DT	34	593	H & V	148	6.000	0.300	0.00165	0.395	0.42%
KXVO	DT	29	563	H	450.3	825.000	0.300	0.01223	0.375	3.26%
KPTM	DT	26	545	H	450.3	1000.000	0.300	0.01482	0.363	4.08%
TOTAL PERCENTAGE OF ANSI VALUE=										19.35%

*** The antenna heights indicated above are 2 meters less than the actual antenna heights*

so that the predicted power densities consider the 2 meter human height allowance.

This evaluation includes facilities collocated at the site, and facilities located within 315 meters.