

R.F. EMISSION COMPLIANCE STATEMENT  
February 27, 2013  
KUCV  
BLED20011022AAR  
Nebraska Educational Telecommunications Commission  
Hallam, NE  
19.5 kW H & 100kW V

The proposed six-bay, mixed polarized antenna is energized such that it produces 100 kW in the vertical plane and 19.5 kW in the horizontal plane, from a center of radiation of 190 meters above ground. The area around the tower is fenced, gated and kept locked. It is therefore a controlled area.

In this assessment the KUCV and KFLV antenna are directional, so worst case OET 69 calculations were applied for these antennas.

KTGL and KIBZ use type 3 ERI omni-directional antennas and therefore we used the formulas expressed in the OET Bulletin, No. 65, August 1997, "Evaluating Compliance with F.C.C. Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", published by the Federal Communication Commission's Office of Science and Engineering, by applying a combination of the element and array pattern as defined in E.P.A. study PB85-245868 ("**Engineering Assessment of the Potential Impact of the Federal Radiation Protection Guidance on the AM, FM and TV Broadcast Services**").

The predicted level of RF non-ionization emissions for the type 3 antennas and the KUCV and KFLV antennas was calculated at a position of 2 meters above ground (head-height) at the base of the tower. The following table shows the emission levels of all radiators at head height.

Call	Freq (MHz)	Pwr (kW)	HAG (m)	Pwr Den $\mu\text{W}/\text{cm}^2$	Controlled Area	
					Max. $\mu\text{W}/\text{cm}^2$	% of Max
KUCV SHPX-4AE-DA Full wave Worst case	91.1	19.5 H/100 V	186	117.93	1000	11.8
KTGL ERI 8 Bay Type #3	92.9	100 H & V	223	4.10	1000	0.41
KIBZ ERI 4 Bay Type #3	104.1	31 H & V	163	2.40	1000	0.24
KFLV LP-2E 2 bay DA Worst case	89.9	5.8 H & V	134	22.24	1000	2.22
					Total	22.62 %

The applicant will continue to protect workers on the tower by either reducing ERP or terminating transmission.

Consequently, it appears that the existing FM station is in full compliance with the Commission's human exposure to radiofrequency electromagnetic field rules and regulations.

The existing tower was constructed in 1988 and the antenna will not significantly alter the silhouette of the existing structure. Therefore, this tower is exempt from further environmental considerations.

Doug Vernier

**Declaration:**

I, Douglas L. Vernier, declare that I have received training as an engineer from the University of Michigan School of Engineering. That, I have received degrees from the University in the field of Broadcast Telecommunications. That, I have been active in broadcast consulting for over 30 years;

That, I have held a Federal Communications Commission First Class Radiotelephone License continually since 1964. In 1985, this license was reissued by the Commission as a lifetime General Radiotelephone license no. PG-16-16464;

That, I am certified as a Professional Broadcast Engineer (#50258) by the Society of Broadcast Engineers, Indianapolis, Indiana. (Life-time Certification received in 2010);

That, my qualifications are a matter of record with the Federal Communications Commission;

That, I have been retained by the Nebraska Educational Telecommunications Commission to prepare the engineering showings appended hereto;

That, I have prepared these broadcast engineering showings, the technical information contained in same and the facts stated within are true of my knowledge;

That, under penalty of perjury, I declare that the foregoing is correct.

Douglas L. Vernier

A handwritten signature in blue ink, appearing to read 'Doug Vernier', with a large, stylized initial 'D'.

Executed of February 27, 2013