

July 21, 2006

R.F. EMISSION COMPLIANCE STATEMENT
KLNE-DT, KLNE-FM, KLNE-TV
Nebraska Educational Telecommunications Commission
Lexington, NE

The proposed facilities will replace the facilities of the KLNE tower which were lost as a result of a small plane crash which took the tower. The proposed antenna will be located on a new tower with one additional TV antenna, an FM antenna and two general communications antennas. The replacement tower is surrounded by a locked and gated fence and is posted with R.F. and high voltage warning signs.

The applicant proposes to use a high gain ERI TRASAR antenna for KLNE-DT, channel 26, DTV operations. The calculation for KLNE-DT's R.F. contribution is based on the use of an antenna that produces a 10% field toward the nadir. For the KLNE-TV, channel 3, antenna it is also proposed that a temporary bat wing antenna be side-mounted at 258 meters above ground. This antenna is not high gain and therefore "worst case" calculations were used at the available STA ERP of 32 kW.

The proposed NET FM twelve-bay, ERI type #3, mixed polarized antenna will be energized such that it produces 100 kW effective radiated power in the horizontal plane and 100 kW ERP in the vertical plane, from a center of radiation of 286 meters above ground. Using 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, and then 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 at a position of 2 meters above ground (head-height) at the base of the tower is 2.48 microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$), which is 0.25 percent of the maximum for this controlled area.

The following table shows the emission levels of all radiators.

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
KLNE-FM	88.7	100 H/100 V	286	2.48	1000	0.25
KLNE-TV ^{*1}	60-66	32 H	258	16.313	1000	1.63
KLNE-DT ^{**}	542-548	375 H	315	1.28	1816.7	0.07
WXL75 ^{***}	162.475	8 V	244	1.783	1000	0.18
KTT815 ^{***}	154.74	0.075 V	122	0.068	1000	0.007
					Total %	2.137

* Worst case, with no regard to relative field toward nadir.

** Assumes use of a high gain UHF antenna, VEF of 10% at -90°.

*** Worst case, with no regard to relative field toward nadir. The actual duty cycle depicted here (100%) is worst case. Actual duty cycle would be <100%.

¹ KLNE-TV operates under STA at maximum ERP of 32 kW.

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

Consequently, it appears that the proposed facilities are in full compliance with the Commission's human exposure to radiofrequency electromagnetic field rules and regulations.

Page #3 is a statement of the preparer, attesting to his qualifications.

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. (Re-certified 1/2006.)

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

Executed on July 21, 2006