

EXHIBIT #E1
ENGINEERING STATEMENT

Concerning the Application of
KPNE-FM
To
Correct Coordinates and Increase the Antenna Height
Of Station KPNE-FM, North Platte, Nebraska
BLED19910711KA

March 24, 2003

Channel 219 C1

18 kW (H), 88 kW (V)

This engineering statement supports the application filed by the Nebraska Educational Telecommunications Commission to increase antenna height, and to correct coordinates. Under this proposal, a type approved transmitter delivers its output to a 14-bay Dielectric DCR-H14CHT75 that radiates a total main-lobe (tilted) power 18 kilowatts in the horizontal plane and 88 kilowatts in the vertical plane. This antenna has .75 degrees beam-tilt. A vertical elevation field graph of this antenna is presented on pages #3-5 of this exhibit.

Coverage Map

Attached to this exhibit as page #6 is an updated coverage map showing the proposed population and area served. The political boundaries of North Platte, the city of licensee, continue to remain fully encompassed by the 60 dBu city service contour. The coverage map was computer generated using the U.S.G.S. World digital geographic data. The N.G.D.C. 30 arc-second digital terrain database and 360 evenly spaced terrain elevation radials were used to project the 60 dBu signal contour. The area within the proposed service contour amounts to 15,346 square kilometers. This figure was determined by squaring the distance to the one mV/m signal contour along 360 evenly spaced radial azimuths and then taking the average of the sum. The resulting average radius (squared) was then multiplied by π to determine the area within the contour. The population within the 60 dBu service contour was determined to be 48,674 people through the use of a computer program which extracts a population count based on population centroids defined by U.S. Census 2000 (SF1) digital census data.

Thirty-six evenly spaced radials were used to determine the antenna height above

average terrain. The computer program uses radial elevations at 0.1 kilometer increments from 3 to 16 kilometers. The elevation points were averaged using the required four-point interpolation method and then the average was employed to project antenna heights above average terrain and the consequent distances to signal contours along the pertinent radials. (See a tabular listing of these contour distances on page #7 of this exhibit.)

Allocation Study:

Exhibit 15, Pages 1-2, is a computer allocation tabular study showing that interference is not caused to an FM radio station, application or construction permit by this proposal. There are no I.F. relationships and the proposed facility is not within 320 kilometers of the U.S. border with Canada or Mexico. Since KPNE-FM operates on channel 219, the spacing rules of Section 73.207, with regard to commercial channel stations, become pertinent. Since the existing KPNE-FM facilities do not have a pertinent spacings relationship with stations operating in the non-reserved band and since an increase in station class is not proposed, a spacings table showing was deemed unnecessary.

Channel-Six Television Protection:

There is only one channel-six TV station within the cutoff distance for NCE channel 219. Exhibit #18 is a complete channel-six TV protection study using the requirements of Section 73.525 of the Commission's Rules and Regulations.

R.F. Hazard compliance:

Exhibit #22 shows compliance with the Commission's R.F. radiation standards.

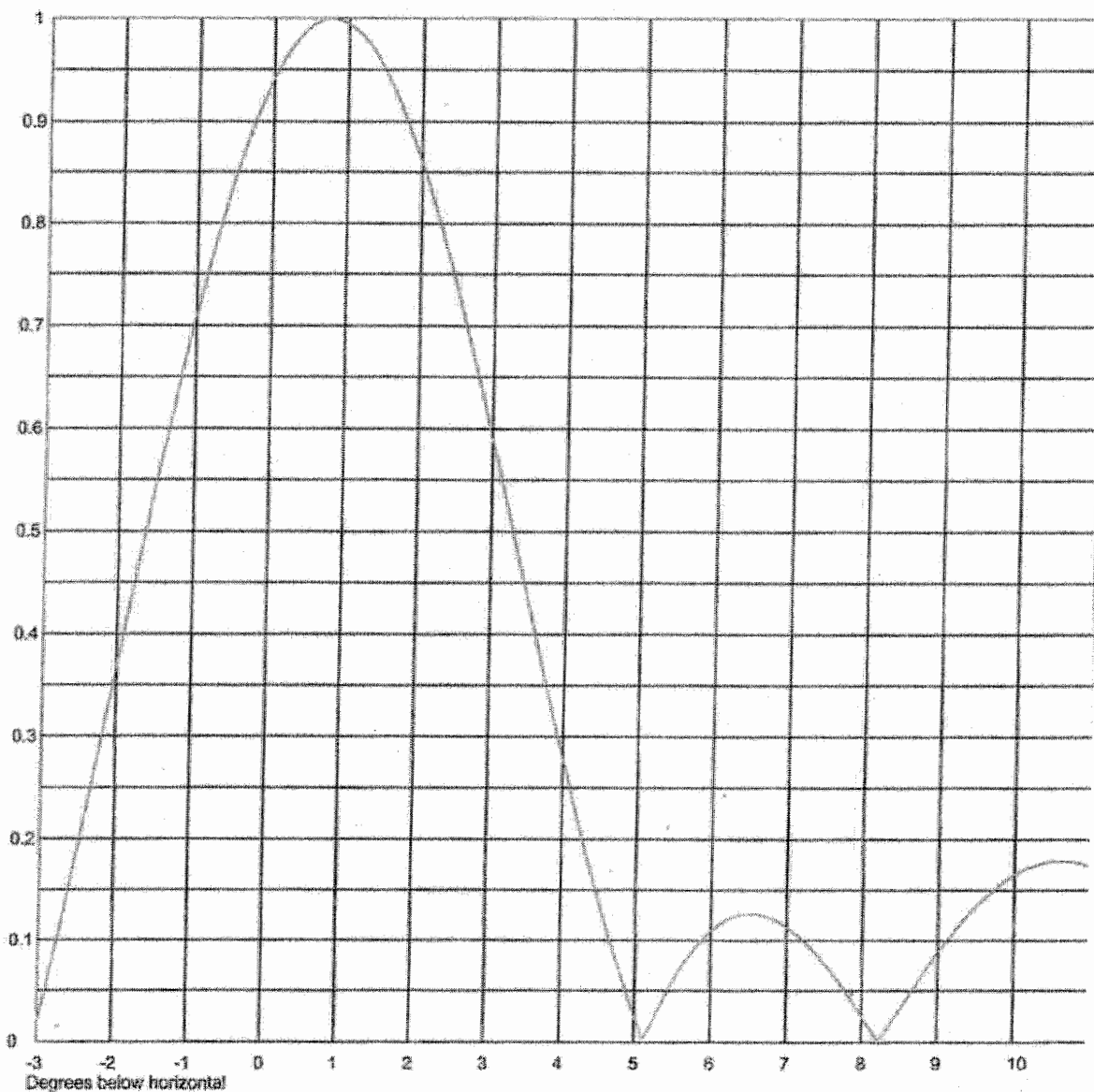
Page #8 of this Engineering Statement is a declaration made by the preparer, Doug Vernier, attesting to his qualifications.



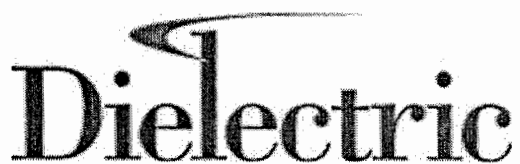
Proposal Number	Revision		
Date	01 Apr 2003		
Call Letters	KPNE	Channel	21
Location	Sutherland, NE		
Customer			
Antenna Type	DCR-H14C		

ELEVATION PATTERN

RMS Gain at Main Lobe	15.32 (11.85 dB)	Beam Tilt	0.75 Degrees
RMS Gain at Horizontal	13.6 (11.34 dB)	Frequency	91.70 MHz
Calculated / Measured	Calculated	Drawing #	FC14H1000153075



Remarks: Hpol Grms = 2.6 ; Vpol Grms = 12.72



Proposal Number

Revision

Date

01 Apr 2003

Call Letters

KPNE

Channel 219

Location

Sutherland, NE

Customer

Antenna Type

DCR-H14C

ELEVATION PATTERN

RMS Gain at Main Lobe

15.32 (11.85 dB)

Beam Tilt

0.75 Degrees

RMS Gain at Horizontal

13.6 (11.34 dB)

Frequency

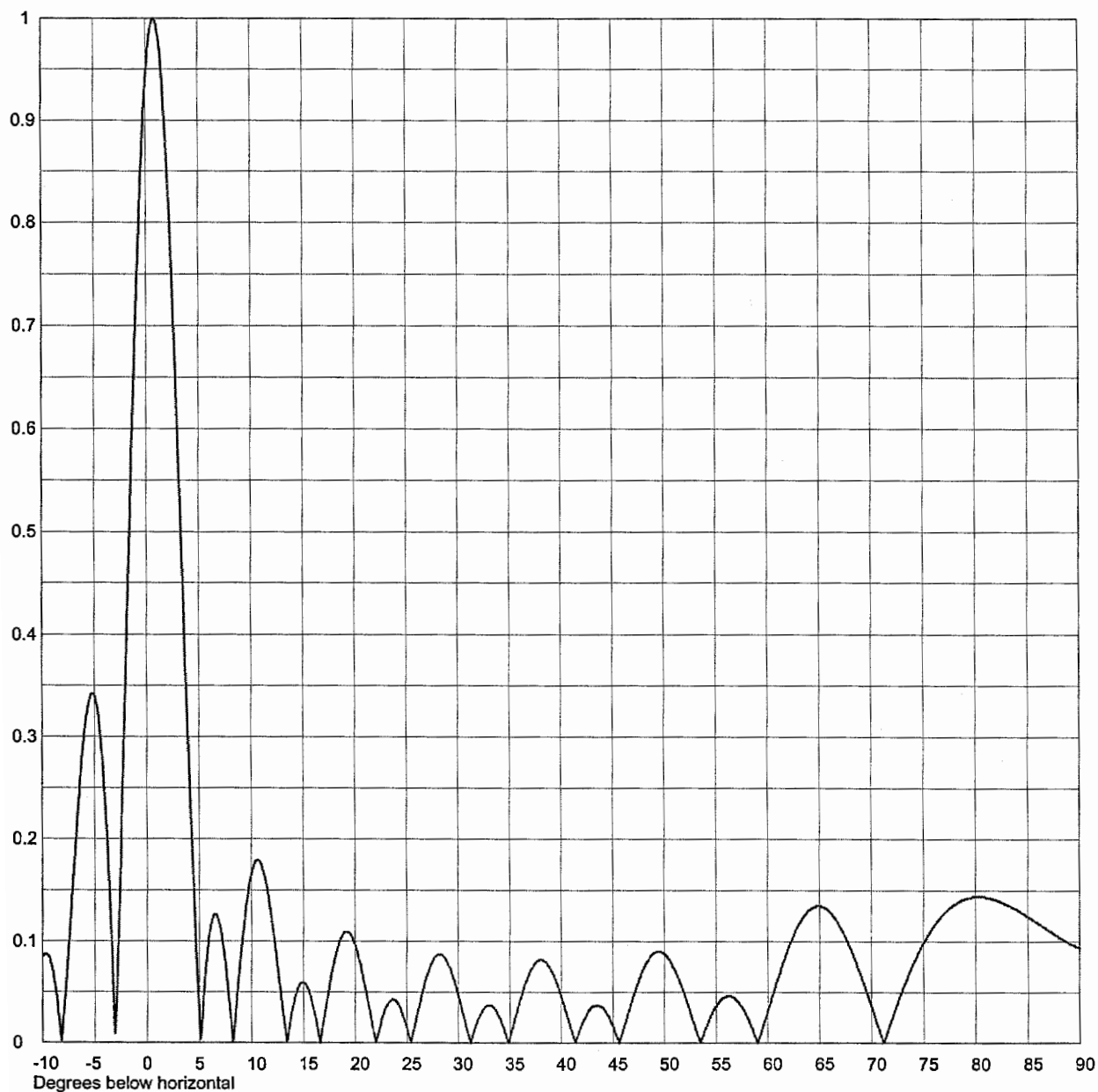
91.70 MHz

Calculated / Measured

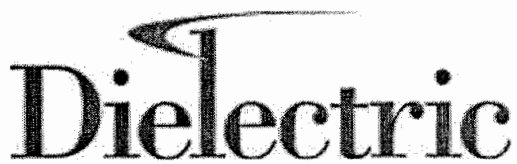
Calculated

Drawing #

FC14H1000153075-90



Remarks: Hpol Grms = 2.6 ; Vpol Grms = 12.72



Proposal Number
 Date **01 Apr 2003**
 Call Letters **KPNE** Channel **219**
 Location **Sutherland, NE**
 Customer
 Antenna Type **DCR-H14C**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # **FC14H1000153075-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.083	2.4	0.763	10.6	0.179	30.5	0.027	51.0	0.072	71.5	0.010
-9.5	0.086	2.6	0.708	10.8	0.178	31.0	0.007	51.5	0.060	72.0	0.025
-9.0	0.069	2.8	0.650	11.0	0.173	31.5	0.011	52.0	0.046	72.5	0.039
-8.5	0.031	3.0	0.589	11.5	0.152	32.0	0.025	52.5	0.030	73.0	0.053
-8.0	0.026	3.2	0.527	12.0	0.117	32.5	0.034	53.0	0.014	73.5	0.066
-7.5	0.096	3.4	0.464	12.5	0.076	33.0	0.037	53.5	0.001	74.0	0.078
-7.0	0.172	3.6	0.401	13.0	0.033	33.5	0.034	54.0	0.015	74.5	0.089
-6.5	0.243	3.8	0.338	13.5	0.006	34.0	0.025	54.5	0.027	75.0	0.099
-6.0	0.302	4.0	0.278	14.0	0.036	34.5	0.011	55.0	0.036	75.5	0.107
-5.5	0.336	4.2	0.220	14.5	0.054	35.0	0.005	55.5	0.043	76.0	0.115
-5.0	0.340	4.4	0.165	15.0	0.059	35.5	0.024	56.0	0.046	76.5	0.122
-4.5	0.306	4.6	0.113	15.5	0.052	36.0	0.042	56.5	0.046	77.0	0.128
-4.0	0.233	4.8	0.066	16.0	0.033	36.5	0.058	57.0	0.042	77.5	0.133
-3.5	0.122	5.0	0.024	16.5	0.006	37.0	0.071	57.5	0.035	78.0	0.137
-3.0	0.022	5.2	0.014	17.0	0.025	37.5	0.079	58.0	0.026	78.5	0.140
-2.8	0.087	5.4	0.046	17.5	0.055	38.0	0.082	58.5	0.014	79.0	0.142
-2.6	0.154	5.6	0.073	18.0	0.081	38.5	0.080	59.0	0.000	79.5	0.143
-2.4	0.225	5.8	0.094	18.5	0.100	39.0	0.072	59.5	0.015	80.0	0.144
-2.2	0.296	6.0	0.110	19.0	0.109	39.5	0.061	60.0	0.032	80.5	0.144
-2.0	0.369	6.2	0.121	19.5	0.108	40.0	0.046	60.5	0.048	81.0	0.143
-1.8	0.441	6.4	0.126	20.0	0.097	40.5	0.029	61.0	0.064	81.5	0.142
-1.6	0.512	6.6	0.126	20.5	0.078	41.0	0.012	61.5	0.080	82.0	0.141
-1.4	0.581	6.8	0.122	21.0	0.053	41.5	0.005	62.0	0.094	82.5	0.139
-1.2	0.647	7.0	0.113	21.5	0.027	42.0	0.019	62.5	0.106	83.0	0.136
-1.0	0.710	7.2	0.101	22.0	0.001	42.5	0.029	63.0	0.117	83.5	0.134
-0.8	0.768	7.4	0.085	22.5	0.020	43.0	0.036	63.5	0.125	84.0	0.131
-0.6	0.821	7.6	0.067	23.0	0.035	43.5	0.037	64.0	0.131	84.5	0.128
-0.4	0.868	7.8	0.046	23.5	0.042	44.0	0.035	64.5	0.134	85.0	0.125
-0.2	0.908	8.0	0.024	24.0	0.041	44.5	0.028	65.0	0.135	85.5	0.121
0.0	0.942	8.2	0.002	24.5	0.031	45.0	0.017	65.5	0.133	86.0	0.118
0.2	0.968	8.4	0.022	25.0	0.015	45.5	0.003	66.0	0.129	86.5	0.114
0.4	0.987	8.6	0.045	25.5	0.005	46.0	0.013	66.5	0.123	87.0	0.111
0.6	0.997	8.8	0.068	26.0	0.028	46.5	0.030	67.0	0.114	87.5	0.108
0.8	1.000	9.0	0.089	26.5	0.049	47.0	0.046	67.5	0.104	88.0	0.104
1.0	0.995	9.2	0.109	27.0	0.067	47.5	0.061	68.0	0.093	88.5	0.101
1.2	0.982	9.4	0.127	27.5	0.080	48.0	0.074	68.5	0.080	89.0	0.098
1.4	0.962	9.6	0.142	28.0	0.087	48.5	0.083	69.0	0.066	89.5	0.096
1.6	0.934	9.8	0.156	28.5	0.086	49.0	0.089	69.5	0.051	90.0	0.094
1.8	0.900	10.0	0.166	29.0	0.078	49.5	0.090	70.0	0.036		
2.0	0.859	10.2	0.173	29.5	0.065	50.0	0.088	70.5	0.020		
2.2	0.813	10.4	0.178	30.0	0.047	50.5	0.082	71.0	0.005		

Remarks: Hpol Grms = 2.6 ; Vpol Grms = 12.72

D. Vernier, Telecommunications Consultants

ERP = 88 kW

Channel = 219

Azimuth Deg.T.	Ave. Elev. 3 to 16 km Meters AMSL	Effective Antenna Height Meters AAT	ERP (dBk)	F(50-50) Distance to 60 dBu Contour km
0	928.2	317.8	19.445	72.42
10	926.2	319.8	19.445	72.57
20	924.4	321.6	19.445	72.70
30	927.4	318.6	19.445	72.48
40	932.3	313.7	19.445	72.11
50	939.7	306.3	19.445	71.57
60	944.5	301.5	19.445	71.21
70	946.0	300.0	19.445	71.09
80	947.7	298.3	19.445	70.96
90	952.2	293.8	19.445	70.60
100	953.7	292.3	19.445	70.48
110	960.2	285.8	19.445	69.95
120	967.2	278.8	19.445	69.38
130	967.5	278.5	19.445	69.35
140	970.5	275.5	19.445	69.11
150	969.5	276.5	19.445	69.19
160	970.5	275.5	19.445	69.10
170	970.9	275.1	19.445	69.07
180	972.0	274.0	19.445	68.98
190	972.2	273.8	19.445	68.96
200	976.4	269.6	19.445	68.61
210	982.4	263.6	19.445	68.11
220	982.9	263.1	19.445	68.07
230	983.7	262.3	19.445	68.00
240	983.7	262.3	19.445	68.00
250	983.2	262.8	19.445	68.04
260	981.5	264.5	19.445	68.19
270	979.0	267.0	19.445	68.39
280	974.3	271.7	19.445	68.78
290	970.1	275.9	19.445	69.14
300	955.8	290.2	19.445	70.32
310	950.4	295.6	19.445	70.74
320	944.0	302.0	19.445	71.24
330	939.7	306.3	19.445	71.57
340	935.0	311.0	19.445	71.92
350	931.6	314.4	19.445	72.17

Ave. = 958.2 M 287.8 M

Antenna Radiation Center AMSL = 1246

NGDC 30 Arc Sec.

Geographic Coordinates:

N. Lat. 41 01 22

W. Lng. 101 09 14

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 25 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;

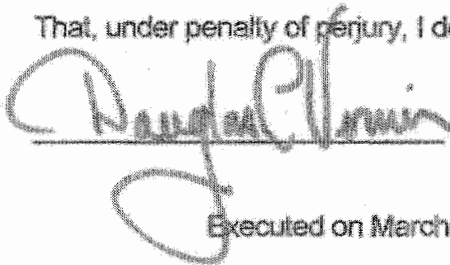
That, I am certified as a Professional Broadcast Engineer (#50258) by the Society of Broadcast Engineers, Indianapolis, Indiana. (Re-certified 10/2000.)

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

That, I have been retained 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 March 25, 2003

Subscribed and sworn before me this March 25th, 2003


Notary Public in and for the State of Iowa

