

**APPLICATION FOR ONE STEP UPGRADE  
FOR  
WILLIAM J. JAEGER AND DONALD W. JAEGER  
LICENSEE OF  
KNKK, CH 296, NEEDLES, CALIFORNIA  
ZONE II TRANSMITTER SITE**

**JUNE 2001**

**BY:  
BEEM COMPANY  
ARCADIA, CA  
(626) 446-3468**

## **ENGINEERING STATEMENT OF JOEL T. SAXBERG**

**This application for one step upgrade, Channel 296C2 to Channel 296C1, was prepared for William J. Jaeger and Donald W. Jaeger, licensee of FM station KNKK, Needles, California. The KNKK transmitter site is located in Zone II (Arizona) and this site meets domestic and international allocation requirements in accordance with §73.207 with respect to full Class C1 operation.**

**RADIOFREQUENCY ELECTROMAGNETIC FIELDS – There are three FM stations mounted on the proposed antenna support structure, KNKK CH 296 (2.35 kW present, 16.5 kW proposed), KADD CH228C1 (2.75 kW ERP), and KRCY CH224C1 (17 kW ERP). The combined ERP is 72.5 kW (H+V). Worst case computations with KNKK center of radiation at 24 meters AGL, KRCY center of radiation at 26 meters AGL and KADD center of radiation at 26 meters show REF levels at 2 meters above ground level to be at 4.58 mW/cm<sup>2</sup>. Using the elevation plane pattern of KNKK, the REF level at two meters above ground level does not exceed 0.05 mW/cm<sup>2</sup>. The other two antennas consist of multiple elements with a downward relative field of less than 0.35, which gives a REF value of 0.29 mW/cm<sup>2</sup>. The combined estimated downward field, at two meters above ground level, is computed to be less than 0.34 mW/cm<sup>2</sup>. The antenna support structure is located on a very steep butte approximately 1000 feet from the transmitter building. The only road to the site is fenced and locked. The entire area is not accessible to the general public. The base of the tower is marked with RF warning signs. Access to the site is for authorized personnel only. This transmitter site location is a controlled area. When necessary for others to climb the tower, KNKK will reduce terminate transmissions to keep personnel from exposure of radiofrequency electromagnetic fields in excess of FCC guidelines and as specified in OET-65.**

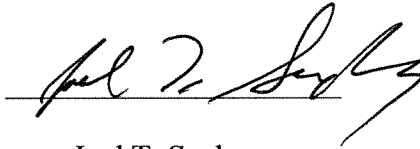
## ENGINEERING CERTIFICATION

**JOEL T. SAXBERG** deposes and says:

1. That he is President of Broadcast Engineering and Equipment Maintenance Company, "**BEEM CO.**", radio engineering consultants. **BEEM CO.** maintains offices at: 2322 S. Second Avenue, Arcadia, CA 91006. Telephone (626) 446-3468
2. That he was graduated from California State University at Los Angeles, February 1966, with a Bachelor of Science degree in Electronic Engineering. He received a MS degree in Electronic Engineering Technology in August 1996.
3. That he has submitted many applications to the Federal Communications Commission for broadcast and auxiliary broadcast construction permits and licenses.
4. That his experience in broadcast engineering is a matter of record and he has spent over thirty years working in the field of radio engineering.
5. That the attached engineering exhibit and reports were prepared by him or under his direction and supervision. That he believes the facts stated therein to be both true and accurate. Statements that are based on information supplied by others are also believed to be true and accurate.
6. That he has performed field work on AM and FM broadcast transmitting systems throughout this country and continues to provide technical consulting services on a daily basis to broadcasters.
7. That he declares under penalty of perjury the foregoing is true and correct.

Executed on

6/18/01



Joel T. Saxberg

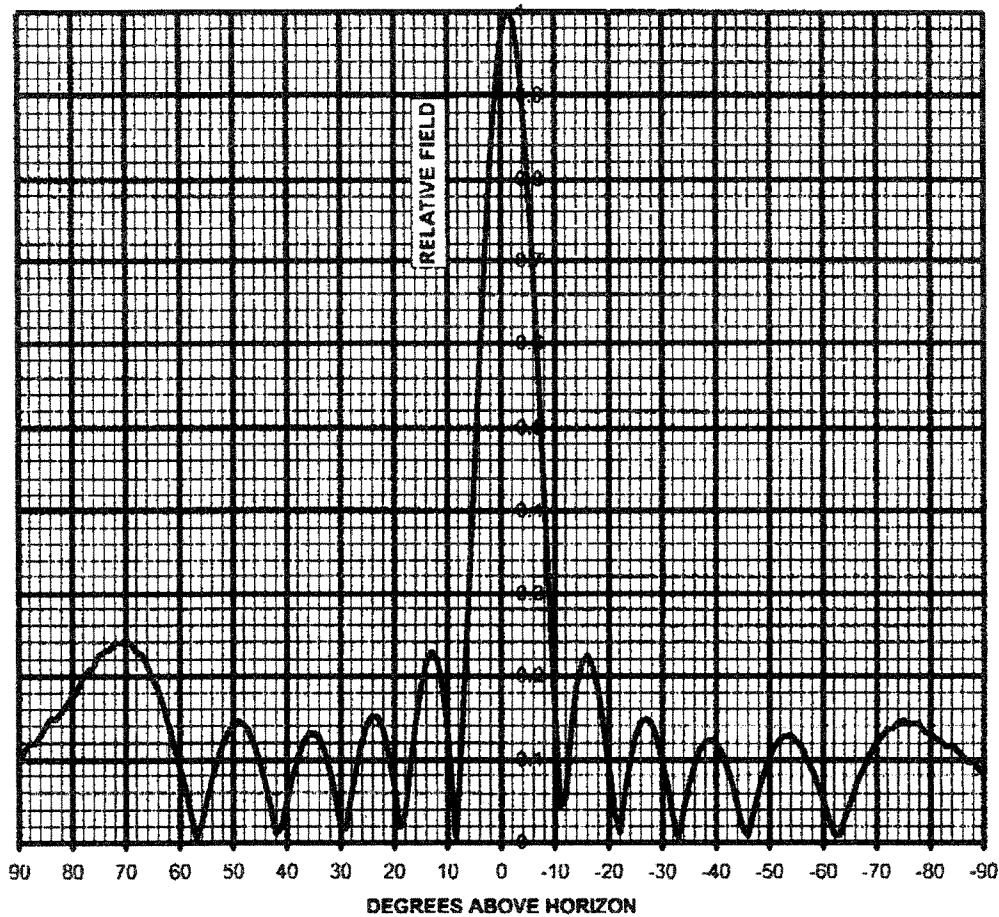


6340 Sky Creek Drive, Sacramento, California 95828  
P.O. Box 282880, Sacramento, California 95829-2880

(916) 383-1177 FAX (916) 383-1182

## PLOT OF ELEVATION PLANE PATTERN

**STATION:** KLUK    107.1 MHz    JMPC-6    1.00 lambda spacing





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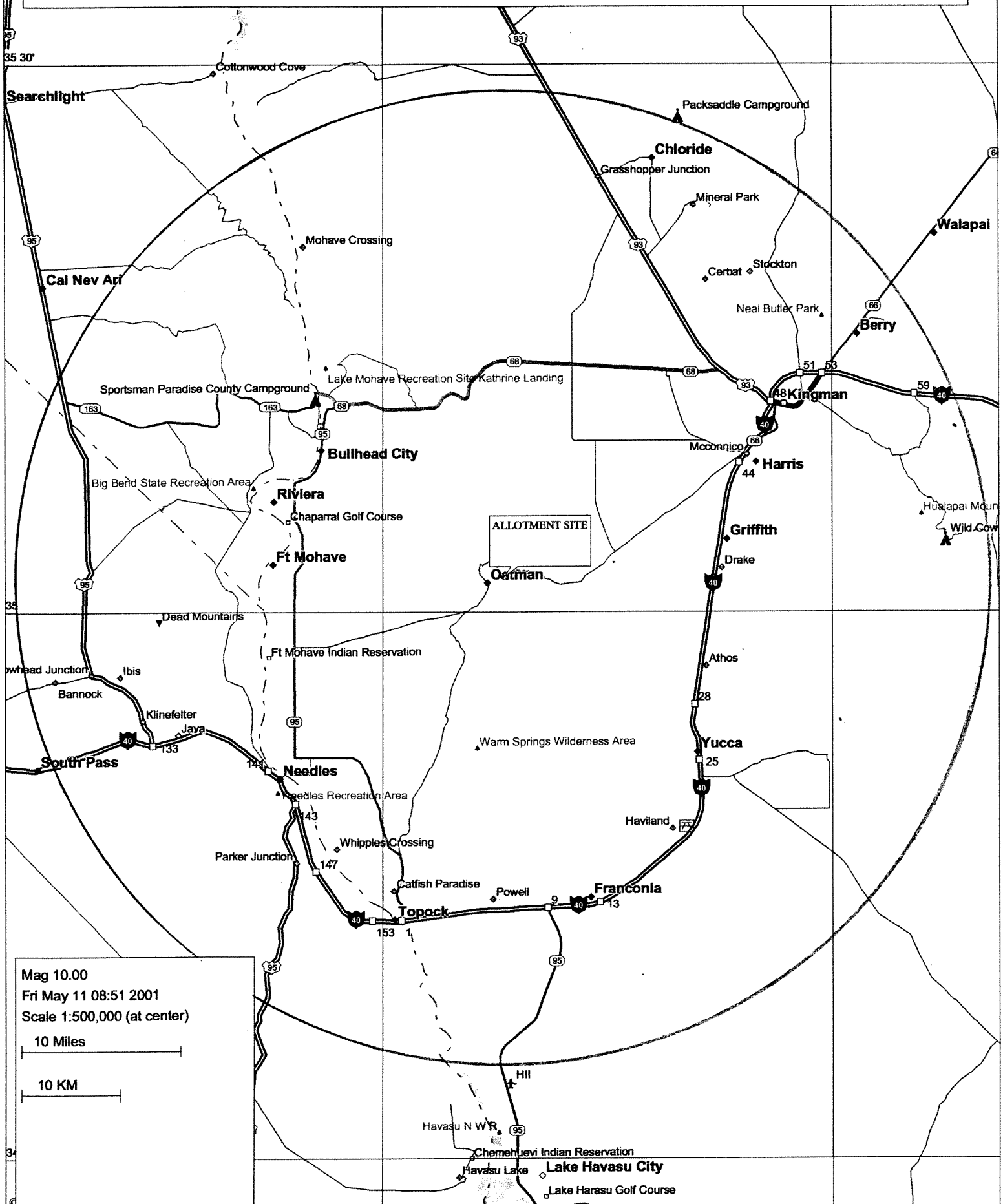
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# TABULATION OF ELEVATION PLANE PATTERN

**STATION:** KLUK 107.1 MHz JMPC-6 1.00 lambda spacing

<u>ELEVATION</u>	<u>RELATIVE</u>	<u>ELEVATION</u>	<u>RELATIVE</u>	<u>ELEVATION</u>	<u>RELATIVE</u>
<u>ANGLE</u>	<u>FIELD</u>	<u>ANGLE</u>	<u>FIELD</u>	<u>ANGLE</u>	<u>FIELD</u>
10	0.134	-25	0.128	-60	0.052
9	0.053	-26	0.144	-61	0.031
8	0.049	-27	0.149	-62	0.011
7	0.168	-28	0.143	-63	0.009
6	0.300	-29	0.125	-64	0.029
5	0.438	-30	0.099	-65	0.047
4	0.575	-31	0.067	-66	0.066
3	0.703	-32	0.031	-67	0.083
2	0.815	-33	0.005	-68	0.096
1	0.904	-34	0.039	-69	0.109
0	0.966	-35	0.069	-70	0.122
-1	0.997	-36	0.094	-71	0.128
-2	0.995	-37	0.112	-72	0.136
-3	0.960	-38	0.121	-73	0.138
-4	0.894	-39	0.124	-74	0.143
-5	0.802	-40	0.120	-75	0.147
-6	0.689	-41	0.109	-76	0.142
-7	0.561	-42	0.092	-77	0.143
-8	0.425	-43	0.070	-78	0.142
-9	0.289	-44	0.045	-79	0.133
-10	0.160	-45	0.018	-80	0.130
-11	0.043	-46	0.010	-81	0.126
-12	0.055	-47	0.036	-82	0.121
-13	0.133	-48	0.062	-83	0.116
-14	0.187	-49	0.084	-84	0.118
-15	0.216	-50	0.103	-85	0.111
-16	0.225	-51	0.116	-86	0.104
-17	0.212	-52	0.126	-87	0.097
-18	0.184	-53	0.129	-88	0.098
-19	0.141	-54	0.129	-89	0.090
-20	0.091	-55	0.123	-90	0.082
-21	0.038	-56	0.115		
-22	0.014	-57	0.102		
-23	0.060	-58	0.088		
-24	0.099	-59	0.070		

# EXHIBIT 13 - ALLOCATION SITE COVERAGE MAP 70 DBU



FM Study for: KNKK

FCC Database Date: 6/1/2001

35-01-58

Location: NEEDLES, CA

Channel Class: C1

114-21-57

[\*] by HAAT indicates calculated as missing in database.

[^] by HAAT indicates value taken from 1999 VAX file.

Call City, State

Chan Class Freq kW

Latitude Dist.

Required

Status Proponent

File Number HAAT

Longitude Azm.

Clear (km)

&gt;&gt;&gt;&gt;&gt;&gt;&gt; Study For Channel 296 107.1 MHz &lt;&lt;&lt;&lt;&lt;&lt;&lt;

KNKK	NEEDLES, CA	296 B	107.1	50.0	34-52-10	31.4	270	
CP	Facility No. 78087	BPH-950921ML	150		114-38-50	234.9	-238.6	SHORT
	Use of 73.215 for short spacing					241	-209.6	SHORT
ALLOC	NEEDLES, CA	296 C2	107.1		35-01-58	0.0	224	
VAC	Facility No. 78087	-		0	114-21-57	0.0	-224.0	SHORT
KNKK	NEEDLES, CA	296 C2	107.1	2.35	35-01-58	0.0	224	
APP	Facility No. 78087	BMPH-010131ABU	585*		114-21-57	0.0	-224.0	SHORT
ALLOC	NEEDLES, CA	296 C2	107.1		35-01-58	0.0	224	
VAC	Facility No. 78087	-		0	114-21-57	0.0	-224.0	SHORT
KNKK	NEEDLES, CA	296 C2	107.1	2.35	35-01-58	0.0	224	
APP	Facility No. 78087	BMPH-010131ABU	585*		114-21-57	0.0	-224.0	SHORT
ALLOC	CIUDAD MORELOS, BN	296 B	107.1		32-38-00	270.49	270	
	Facility No. 96185	-		0	114-51-00	189.7	+0.49	CLOSE
ALLOC	COLORADO CITY, AZ	296 C1	107.1		37-05-42	252.3	245	
VAC	Facility No. 69623	-		0	113-11-12	24.6	+7.3	CLOSE
KZNZ	COLORADO CITY, AZ	296 C1	107.1	34.0	37-05-42	252.3	245	
APP	Facility No. 69623	BPH-010306ABX	344		113-11-12	24.6	+7.3	CLOSE
ALLOCR	QUARTZSIDE, AZ	297 C3	107.3		33-39-06	155.4	144	
ADD		RM-10082		0	114-04-56	170.3	+11.4	CLOSE
KYOR	YUCCA VALLEY, CA	295 B	106.9	4.00	34-04-55	209.8	195	
LIC	Facility No. 14058	BLH-880516KD	418		116-20-32	240.4	+14.8	CLOSE
KSNEFM	LAS VEGAS, NV	293 C	106.5	100.	36-00-30	122.8	105	
LIC	Facility No. 71525	BLH-870827KC	352		115-00-20	332.0	+17.8	CLEAR
ALLOCR	AGUILA, AZ	297 C3	107.3		33-56-34	163.1	144	
ADD		RM-10016		0	113-10-24	137.5	+19.1	CLEAR
ALLOC	OVERTON, NV	295 C1	106.9		36-53-17	206.7	177	
ADD		Dockt-99-85		0	114-34-27	354.8	+29.7	CLEAR
ALLOC	OVERTON, NV	295 C1	106.9		36-53-17	206.7	177	
VAC	Facility No. 106508	Dockt-99-85		0	114-34-27	354.8	+29.7	CLEAR

 State Borders
  Lat/Lon Grid