

RADIOFREQUENCY ELELCTROMAGNETIC FIELD
MEASUREMENTS
AT FLINT PEAK AUXILIARY TRANSMITTER SITE
OF
KLVE, 107.5 MHZ, AND KSCA 101.9 MHZ

JANUARY 30, 2011

BY:
BEEM CO.
ARCADIA, CA
(626) 446-3468

ENGINEERING STATEMENT OF JOEL T. SAXBERG

On January 30, 2011, radiofrequency electromagnetic field measurements were made inside a fenced communications site called “Flint Peak” which is located near the west side of Pasadena. Flint Peak is the auxiliary transmitter site for KLVE, 107.5 MHz, and KSCA, 101.9 MHz. The main antennas for KLVE and KSCA are located on Mt. Wilson. Flint Peak is also the main transmitter site for KLAX 97.9 MHz. The purpose of taking radiofrequency electromagnetic field measurements was to meet one of the special operating conditions spelled out in the construction permit.

SITE DESCRIPTION – Flint Peak is a communications site located on the peak of a hill. It is fenced with a located gate and the topography is such that there are steep slopes just beyond the perimeter fence. The only access to the site is from the access road which leads to a locked gate. Since this site is fenced and locked, it is considered as a “controlled area” with access being to authorized personnel only.

SPECIAL OPERATING CONDITIONS - One of the special operating conditions in the construction permit states the following: The permittee/licensee shall, upon completion of construction and during the equipment test period, make proper radiofrequency electromagnetic (RF) field strength measurements throughout the transmitter site area to determine if there are any areas that exceed the FCC guidelines for human exposure to RF fields. It further states that if necessary fences must be erected at such distances and in such a manner as to prevent the exposure of humans to RF fields in excess of the FCC Guidelines. This report addresses the above.

RADIOFREQUENCY ELECTROMAGNETIC FIELD MEASUREMENTS – A 10’ X 10’ grid was laid out on the relatively flat areas inside the perimeter

fence. Spatial average readings were taken at each location on the grid. A drawing is also attached showing the fence boundary and gate. There are very steep hillsides just outside the perimeter fence making readings beyond the fence next to impossible.

A Narda Model 8718-10 radiation survey meter and an 8742 shaped E field probe were used to take power density measurements. A Nardalert XT personal monitor was also used, and worn by myself when surveying the site. The manufacturer, L3 Communications calibrated the measuring instruments on the following dates:

8718-10, s/n 01559, calibrated 8/2006

8732, s/n 06012, calibrated 8/2006

8742, s/n 03004, calibrated 8/2006

Method of Measurement – The survey meter was connected to a shaped E-Field probe and the system was calibrated using the shielded meter case. Once calibrated, the meter was initially set to read and store spatial average values. The shaped E-Field probe is set to read percent of standard for “controlled environments”, which is the occupational standard. General Public maximum permissible values in the FM and TV broadcast frequencies are 20% of standard. The general public may walk the paved/dirt site access road to the site gate only. Steep hillsides, site fences, and very heavy brush block site access except through the road gate. Spatial average measurements were taken inside the fenced area and around the base of the KLAX, KLVE-A and KSCA-A towers. Power density readings were relatively low, except in the vicinity of the active antenna tower bases. The highest values occurred at the base of the KLAX monopole antenna support structure. Spatial average readings did not exceed 50% of Standard around the bases of the towers with active FM antennas. All other readings around the site were much lower.

At the gate where the general public may walk to and stand outside, there were no readings on the survey meter. There were no “hot spots” or abnormally high readings. Assisting in the site survey was Mr. Tom Koza, KLVE/KCSA Engineer, and Rick, assistant to Tom who recorded the readings as they were called out.

“A” column begins at south east corner of parking lot and goes in a north west direction at 10’ intervals.

“B” column begins at 10’ south west of “A1” and goes northwest in 10’ intervals

“C” column begins at 20’ southwest of “A1” and goes northwest in 10’ intervals

“D” column begins at 30’ southwest of “A1” and goes northwest in 10’ intervals.

“E” column begins at 40’ southwest of “A1” and curves in front of main entrance to building.

“F” column is on upper site driveway

“G” column is around large upper site tower

Pt.	% STD Reading	Pt.	%STD Reading	Pt.	%STD Reading
A1	6.693	B1	4.987	C1	5.062
A2	3.768	B2	4.612	C2	5.531
A3	3.075	B3	3.825	C3	3.843
A4	3.393	B4	3.450	C4	3.787
A5	2.981	B5	2.625	C5	3.450
A6	2.550	B6	2.662	C6	2.756
A7	2.793	B7	2.850	C7	2.568
A8	2.393	B8	2.400		
A9	1.837				
A10	1.537		% STD.		% STD
A11	2.100	Pt.	Reading	Pt.	Reading
A12	2.550	E1	5.418	G1	0.9375
A13	2.531	E2	19.31*	G2	1.312
A14	2.793	E3	3.750	G3	1.518
A15	2.793	E4	2.006	G4	1.687
A16	2.793	E5	1.781	G5	1.950
A17	3.262	E6	2.156	G6	1.762
A18	3.656	E7	1.275	G7	1.125
A19	3.431	E8	2.475	G8	0.2250
A20	3.318	E9	14.23*		
A21	3.337	E10	1.931		
A22	2.812	E11	3.168		
A23	3.075	E12	1.781		
A24	2.887	E13	1.856		

A25	2.943	E14	1.162
A26	3.281		
A27	3.225		
A28	3.243	F1	0.2812
A29	3.468	F2	2.212
A30	3.356	F3	0.6375
A31	2.662	F4	0.4312
A32	1.818	F5	0.0000
A33	1.912	F6	0.0000
A34	1.537	F7	0.0750
A35	1.237	F8	0.3750
A36	1.331	F9	0.0000

*Near base of on air transmitter antenna base structure

SUMMARY – Site measurements show that there were no locations where the power density readings exceeded the FCC guide line limit for “Controlled Areas”. This was true for spatial average readings as well as an instantaneous peak setting on the radiation survey meter. It was determined that no additional fencing was needed inside or outside the presently fenced site. If necessary in the future, this controlled area would also meet general public guidelines with a 7’ diameter fence around the KLAX tower base, and a 5’ diameter fence around the KLVE tower base.

ENGINEERING CERTIFICATION

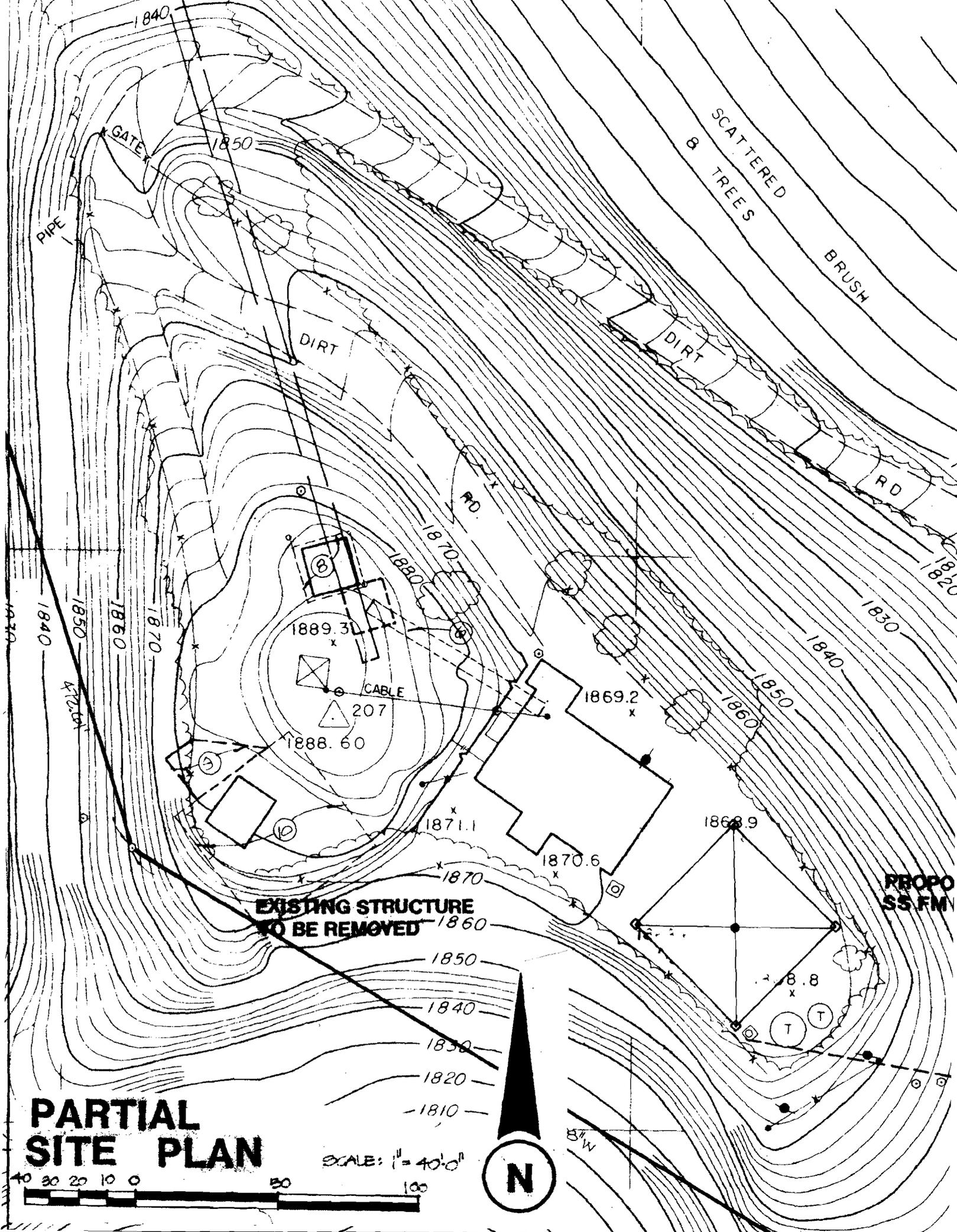
JOEL T. SAXBERG deposes and says:

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 forty years working in the field of radio engineering.
5. That the attached report was 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 Jan. 30, 2010



Joel T. Saxberg



1840

GATE

PIPE

1850

DIRT

RD

SCATTERED
& TREES
BRUSH

DIRT

RD

1870
1840
1850
1860
1870

1889.3

CABLE

207

1888.60

1869.2

1868.9

1871.1

1870.6

**EXISTING STRUCTURE
TO BE REMOVED**

**PROPOSED
SS FM**

1850

1840

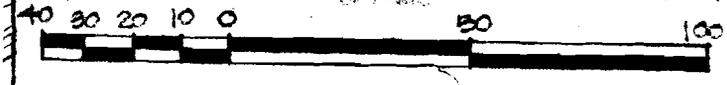
1830

1820

1810

**PARTIAL
SITE PLAN**

SCALE: 1" = 40'-0"



87°W