

Sutro Tower, Inc. • San Francisco, California

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained by Sutro Tower, Inc. to evaluate RF exposure levels at the Sutro Tower broadcast site, 1 La Avanzada Street, San Francisco, California, for compliance with appropriate guidelines limiting human exposure to radio frequency electromagnetic fields.

Background Information

Sutro Tower is located near Mt. Sutro in San Francisco, California, and currently supports the transmitting facilities for ten full-service NTSC TV stations, nine DTV stations, and four FM stations. As part of the DTV antenna installation project, Sutro Tower agreed to provide measurement data of existing RF exposure levels at 200 locations within a 1,000-foot radius of the tower. Measurement results are required to be reviewed for three purposes:

1. Confirm that all RF levels are below the RFR calculations provided in the EIR
2. Identify any street intersections with RFR levels at or above 5% of the FCC standard
3. Identify any localized fields in excess of the standard.

Prevailing Exposure Standards

The U.S. Congress requires that the Federal Communications Commission (“FCC”) evaluate its actions for possible significant impact on the environment. In Docket 93-62, effective October 15, 1997, the FCC adopted the human exposure limits for field strength and power density recommended in Report No. 86, “Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields,” published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements (“NCRP”). Separate limits apply for occupational and public exposure conditions, with the latter limits generally five times more restrictive. The more recent Institute of Electrical and Electronics Engineers (“IEEE”) Standard C95.1-1999, “Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz,” includes nearly identical exposure limits. A summary of the FCC’s exposure limits is shown in Figure 1. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

Measurement Procedure

The site was visited by the undersigned, a qualified engineer employed by Hammett & Edison, Inc., on June 30, 2006. Measurements were made at 209 locations along all residential streets within a 1,000-foot radius of Sutro Tower, as shown by the purple dots on Figure 2. Measurements were taken at a typical spacing of about 60–75 feet along the streets, although variations occurred due to topography and street layout. Measurements were made using a Wandel & Goltermann Type EMR-



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300 Radiation Meter (Serial No. P-0008) with Type 18 and 25 Isotropic Electric Field Probes (Serial Nos. F-0034 and E-0001, respectively) last calibrated by the manufacturer on May 12, 2005, March 2, 2006, and April 15, 2006, respectively.

Measurement Results

1. RF power density calculations had been made on the 100-by-100 meter grid centered on Sutro Tower as part of the Hammett & Edison study, dated January 3, 1997, for the EIR. This grid is shown by the green lines on Figure 2, and there are 26 calculation points (shown by the green dots) within the 1,000-foot (300-meter) circle that were close to measurement locations (shown by the purple circles). These are summarized in Figure 3, and a comparison shows that all measured values are less than the corresponding calculated values, as expected.

2. Power density levels in excess of 5% of the FCC standard for public exposure were noted at Summit Reservoir and on the street in the following eight areas:

- End of St. Germain Avenue
- Middle to west end of Palo Alto Avenue
- Middle to end of Fairview Court
- Clairview Court
- Panorama Drive near Marview Way and Clairview Court
- Dellbrook Avenue at Greenview Court
- Greenview Court
- Forest Knolls Drive at Christopher Drive

3. There were no localized fields observed in excess of the FCC standard.

4. Four of the previous measurement locations were on the cap of Sutro Reservoir. A fence has since been constructed to block public access to the reservoir cap. Measurements were instead conducted on the path surrounding the reservoir at locations as close as possible to those previously used. It is estimated that the new measurement locations on the path are each about 20 feet from the former locations on the cap.

Conclusion

It is my professional opinion that the measurements reported above comply with the requirements of the project proposal. Further, it is my professional opinion that the TV and FM broadcast stations at Sutro Tower continue to comply with prevailing FCC requirements for limiting public exposure to radio frequency energy.

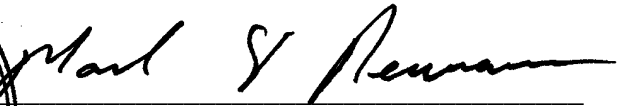
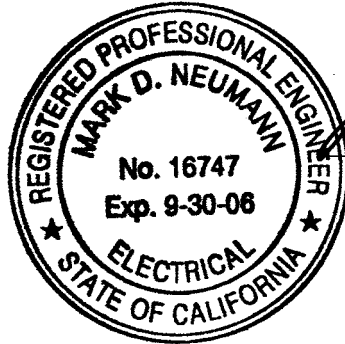


List of Figures

In carrying out these engineering studies, the following attached figures were prepared under my direct supervision:

1. Summary of FCC RF exposure guidelines
2. Map showing measurement locations and calculation grid
3. Comparison of measurements with calculated power density levels.

September 19, 2006



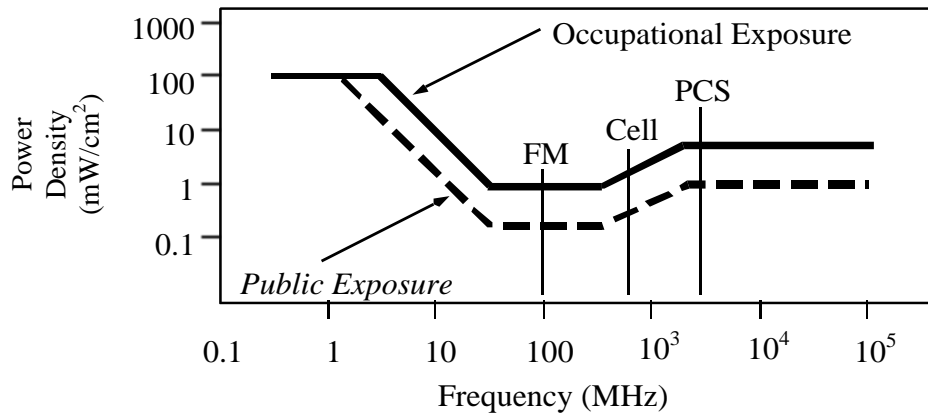
Mark D. Neumann, P.E.

FCC Radio Frequency Protection Guide

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission (“FCC”) to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The FCC adopted the limits from Report No. 86, “Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields,” published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements, which are nearly identical to the more recent Institute of Electrical and Electronics Engineers Standard C95.1-1999, “Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.” These limits apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

As shown in the table and chart below, separate limits apply for occupational and public exposure conditions, with the latter limits (in *italics* and/or dashed) up to five times more restrictive:

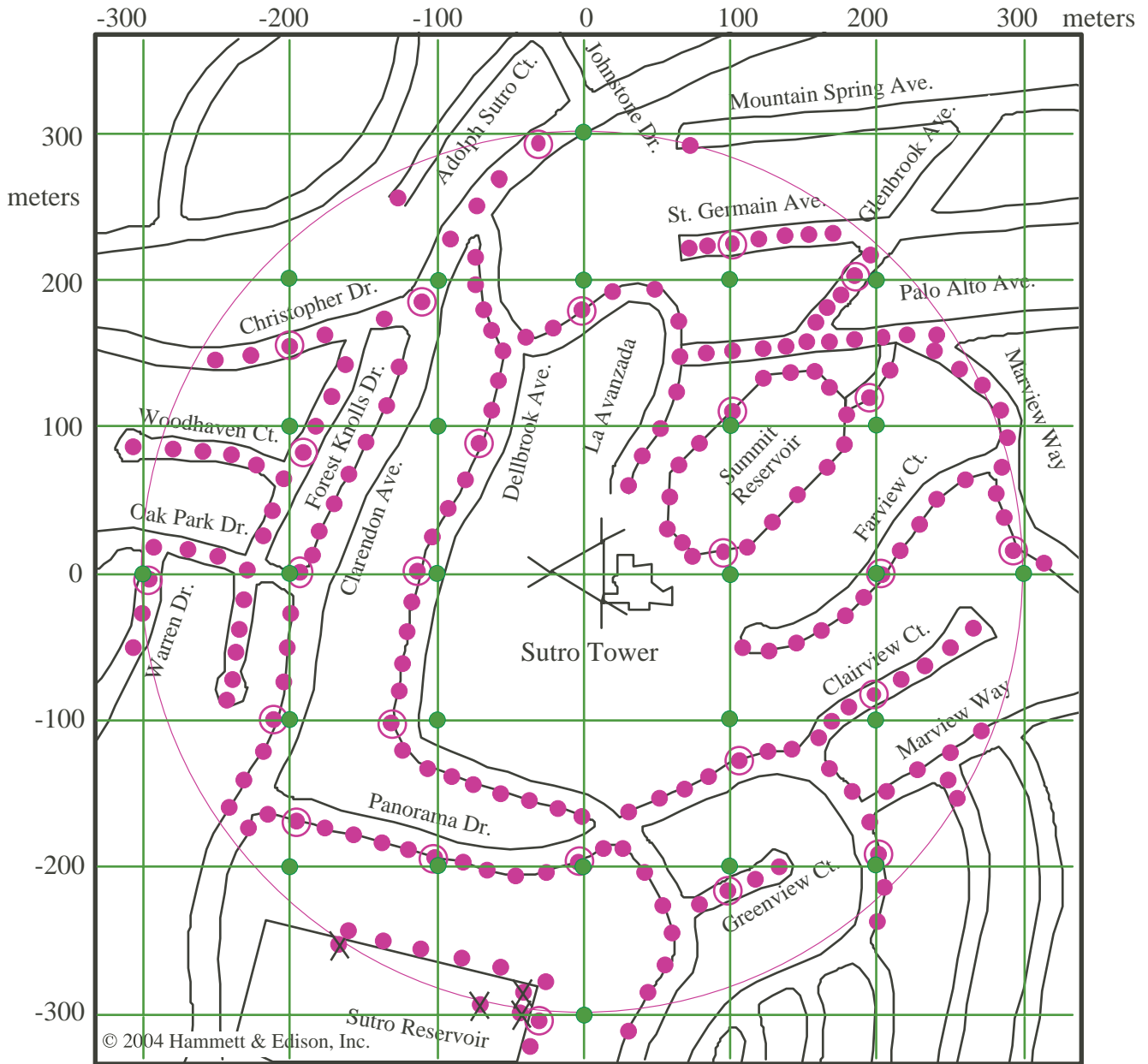
Frequency Applicable Range (MHz)	Electromagnetic Fields (f is frequency of emission in MHz)					
	Electric Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm ²)	
0.3 – 1.34	614	<i>614</i>	1.63	<i>1.63</i>	100	<i>100</i>
1.34 – 3.0	614	<i>823.8/f</i>	1.63	<i>2.19/f</i>	100	<i>180/f²</i>
3.0 – 30	1842/ f	<i>823.8/f</i>	4.89/ f	<i>2.19/f</i>	900/ f ²	<i>180/f²</i>
30 – 300	61.4	<i>27.5</i>	0.163	<i>0.0729</i>	1.0	<i>0.2</i>
300 – 1,500	3.54√f	<i>1.59√f</i>	√f/106	<i>√f/238</i>	f/300	<i>f/1500</i>
1,500 – 100,000	137	<i>61.4</i>	0.364	<i>0.163</i>	5.0	<i>1.0</i>



Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits, and higher levels also are allowed for exposures to small areas, such that the spatially averaged levels do not exceed the limits. However, neither of these allowances is incorporated in the conservative calculation formulas in the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) for projecting field levels. Hammett & Edison has built those formulas into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radio sources. The program allows for the description of buildings and uneven terrain, if required to obtain more accurate projections.



Calculation and Measurement Locations



Green lines denote calculation grid from report dated January 3, 1997.
Green dots used for comparison in Figure 3.
Purple dots denote measurements taken June 30, 2006.
Circled purple dots used for comparison in Figure 3.
Crossed out purple dots on Sutro Reservoir could not be accessed due to a fence, and were relocated as shown.

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Comparison of Measured vs. Calculated RF Power Density

Calculated*		Measured†		Measured less than Calculated?
Grid Coordinates	Power Density	Nearby Street Address	Power Density	
-300, 0	4.40%	5 Warren Drive	1.62%	yes
-200, 200	4.92%	15 Christopher Drive	3.32%	yes
-200, 100	5.97%	38 Forest Knolls Drive	2.81%	yes
-200, 0	6.13%	Clarendon Avenue at Glenhaven	2.45%	yes
-200, -100	4.86%	Clarendon 150 ft north of Panorama	1.72%	yes
-200, -200	3.75%	791 Panorama Drive	3.18%	yes
-100, 200	5.91%	Clarendon at Christopher Drive	2.69%	yes
-100, 100	8.63%	559 Dellbrook Avenue	3.32%	yes
-100, 0	8.33%	507 Dellbrook Avenue	3.06%	yes
-100, -100	6.93%	465 Dellbrook Avenue	3.18%	yes
-100, -200	5.89%	737 Panorama Drive	3.32%	yes
0, 300	4.47%	Clarendon near Johnstone Drive	0.58%	yes
0, 200	6.74%	La Avanzada	1.92%	yes
0, -200	8.73%	705 Panorama Drive	4.01%	yes
0, -300	4.35%	Sutro Reservoir	1.72%	yes
100, 200	6.91%	160 St. Germain Avenue	2.34%	yes
100, 100	13.8%	Summit Reservoir (northwest edge)	8.49%	yes
100, 0	14.3%	Summit Reservoir (south edge)	7.00%‡	yes
100, -100	12.0%	630 Panorama Drive	6.50%	yes
100, -200	9.01%	17 Greenview Court	4.50%‡	yes
200, 200	5.39%	100 Glenbrook Avenue	3.73%	yes
200, 100	7.88%	Summit Reservoir (northeast path)	5.00%	yes
200, 0	8.16%	48 Farview Court	5.75%‡	yes
200, -100	8.06%	27 Clairview Court	5.10%‡	yes
200, -200	7.80%	546 Panorama Drive	6.65%‡	yes
300, 0	5.27%	173 Marview Way	3.18%	yes

* Data taken from report dated January 3, 1997, expressed as percent of FCC public limits.

† Measurements taken June 30, 2006, expressed as percent of most restrictive FCC limit of 0.2 mW/cm², except as noted.

‡ Percentage of applicable public limit for frequencies involved. Type 25 frequency-shaped probe used.

