

**LITTLE FARNSWORTH PEAK**

**Electromagnetic Energy Measurements, Alpha Property, Ground Level and Rooftops**

**Date: July 29, 2003**





**ACCESS TO EQUIPMENT SHELTERS, ANTENNA STRUCTURES AND TOWERS IS BY PERMISSION ONLY.** Access to antenna structures and towers is restricted to properly equipped, trained and insured contractors. Radio frequency energy fields on antenna structures and towers may exceed FCC limits for Occupational / Controlled maximum permissible exposure.



**FOR INFORMATION CALL KEITH HILTON AT (801) 284-4701 or PAGE AT (801) 264-7701.** For general information concerning human exposure to electromagnetic energy, obtain FCC OET Bulletin 65 or 56 on the FCC web site at <http://www.fcc.gov/oet/info/documents/bulletins/>.



**EXCLUDING EQUIPMENT SHELTERS, ANTENNA STRUCTURES AND TOWERS, MEASURED RADIO FREQUENCY POWER DENSITY ON ALPHA COMMUNICATIONS PROPERTY (INCLUDING ROADWAYS), FROM GROUND LEVEL TO NINE (9) FEET ABOVE ROOF LEVEL, IS LESS THAN 5% OF THE FCC LIMIT FOR OCCUPATIONAL /CONTROLLED, MAXIMUM PERMISSIBLE EXPOSURE.** Exposure time is continuous. Energy levels are routinely verified and logged.



## CURRENT INFORMATION

Date: July 29, 2003

Subject: Modification of Color Key used to display RF energy boundaries and zones

We have made some modifications to the Color Key and reference used to depict RF energy boundaries and zones on Little Farnsworth peak.

In the past we referenced all ground and roof measurements to the General Population /Uncontrolled MPE limit, while antenna structures and towers were referenced to the Occupational / Controlled limit. Beginning with this site map, all measurements will be referenced, as a percentage, to the Occupational / Controlled limit. The single reference is less confusing and conforms more closely to evolving practice.

We have added the "Purple" zone, suggested by OSHA, to identify locations with very low (less than 5% of Occupational / Controlled) RF energy levels. While continuous exposure is allowed in energy fields below 20%, cool down after timed exposure is extended (and difficult to estimate) as the energy levels in the cool down area approach the 20% limit. Purple markers and depictions identify areas suitable for cool down after timed exposure to higher energy fields.

As a result of these changes the predominant color on the site map will become purple, because RF energy at ground level and on roof tops is less than 5%. Notations on the site map will now reflect the new Occupational / Controlled reference. Purple markers will be included on the primary tower to identify potential cool down areas.

Energy levels on the site have not increased. Modifications to the Color Key were made to keep us abreast of evolving practices. The colors used here conform as closely as possible to the latest FCC, ANSI, OSHA, and ISO standards. As always, signs and markers identify the boundary of an exposure limit. Beyond the sign or marker, energy levels in certain areas will exceed the limit indicated by the sign or marker. In this case, the zone beyond the sign or marker is illustrated in progressive shades of the appropriate color. For instance, the blue NOTICE marks the boundary of the General Population / Uncontrolled (20% of Occupational / Controlled) exposure limit. The area beyond the blue NOTICE sign is the Blue Zone. Within the Blue Zone, variations in shading or intensity of blue, correspond to variations in RF energy. When energy levels in the Blue Zone exceed 100% of the Occupational / Controlled limit the boundary of the Yellow Zone is established. The area beyond the yellow Caution sign or yellow markers is the Yellow Zone.

The Color Key definition follows, if there are any questions or problems call Keith Hilton at (801) 284-4701 or page at (801) 264-7701.

## COLOR KEY

The Color Key is aligned to match the colors used on standard EME Awareness Signs. Energy is expressed as a percentage of the Occupational / Controlled MPE limit.



### RED ZONE

Red signs or markers indicate immediate danger, avoid the area !!

### ORANGE ZONE

The Orange Warning Sign marks the start of the (1000%) 10x Controlled boundary. Exposure time may be less than 36 seconds. Timed exposure is difficult to manage, **avoid the area.**

### YELLOW ZONE

The Yellow Caution Sign marks the start of the (100%) Controlled boundary. Exposure time may be less than 6 minutes. Timed exposure can be managed with proper training and safety equipment. Unescorted access to Controlled areas is restricted to properly trained and equipped contractors.

### BLUE ZONE

The Blue Notice Sign marks the start of the (20%) Uncontrolled boundary. Exposure time may be less than 30 minutes. Timed exposure can be managed by avoiding certain areas. Unescorted access to Uncontrolled areas is restricted to properly trained contractors.

### GREEN ZONE

Green markers or patterns define the (5%) continuous exposure area, signs are not typically used. Exposure time is continuous. While energy levels are low, they may be high enough to extend the cool down period after timed exposure. Energy levels are routinely verified.

### VIOLET (PURPLE) ZONE

Violet markers or patterns mark very low (<5%) energy levels, suitable for cool down after timed exposure. Signs are not typically used. Exposure time is continuous. Energy levels are routinely verified.