

# ENGINEERING REPORT

**W. RICHARD GREEN AND ASSOCIATES**

CONSULTING TV & RADIO ENGINEERS

3200 WILKINSON ROAD

CAMERON PARK, CA 95682

## **ENGINEERING REPORT**

**ON BEHALF OF CAPITAL PUBLIC RADIO INC.**

**KXJZ-FM & KXJZ-AUX LICENSED TO SACRAMENTO, CA**

**FACILITY: 8336**

**FCC FILE NO: BLXED 20080813AEU**

**OCTOBER 10, 2008**

## RF RADIATION DENSITY MEASUREMENTS

### COMBINED FM TRANSMITTER FACILITY SACRAMENTO, CALIFORNIA

#### INTRODUCTION

This firm has been retained by Capital Public Radio to measure the level of Radio Frequency Radiation Density at the site of the KXJZ-FM AND KXJZ-AUXILIARY COMBINED TRANSMITTER FACILITY. That work has been completed and the results are contained within this engineering report.

On October 10, 2008 between the hours of 10:30 AM and 1:15 PM, RF field measurements were taken at the KXJZ-FM transmitter site on Elverta Rd in Rio Linda, CA.

#### EQUIPMENT - PROCEDURE - DATA

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EQUIPMENT: RF POWER DENSITY MONITOR SYSTEM; Narda Model NBM-550 (SN: B-0054).  
RF PROBE, ELECTRIC FIELD model: 550/01 (SN: B-0054)

ADDITIONAL: RF SURVEY METER: LORAL Model 8718  
RF PROBE: Isotropic response (3.0 khz - 40 ghz)

PROCEDURE: The entire tower compound was surveyed including the perimeter chain link fence, gate and all six of the guy wire anchors which are also individually fenced and gated.

Standard RF measurement procedures were followed as recommended by IEEE C95.1 1991 / ANSI C95.1-1992 (un-controlled environment) (MPE) MAXIMUM PERMISSABLE EXPOSURE) 200 Khz to 40 Ghz). Standard IEEE recommended measurement procedures were in practice throughout the assessment period. Instantaneous peak readings were recorded with time and spatial averaging also recorded but not required for site compliance Ref: IEEE/ANSI c95.1-1992, "Standards for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3Khz to 300 Ghz.

CONDITIONS: The measurement process at the KXJZ-FM transmitter site was conducted under normal environment conditions and with all transmitters functioning normally.

RESULTS: With the exception of the outward South-West guy anchor, the highest RF voltage/current/power density was measured to be well below the MPE for an uncontrolled area transmitter site. The top guy wire contact current did exceed the MPE limit, however, the anchor is completely enclosed by a chain link fence with a locked gate and is posted with a warning sign "DANGER RADIO FREQUENCY EXPOSURE DO NOT ENTER" "NO TRESSPASSING".

CONCLUSION: With the exception as noted above, the entire transmitter site was found to meet the FCC's requirements for maximum permissible RF radiation density at two meters above ground level for un-controlled environment – 0.2 Mw/C m2. The entire antenna compound and adjacent surrounding area meets the FCC requirements for controlled environment as well.

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END OF REPORT

If anyone concerned with this engineering statement or the enclosed engineering information may require additional information or would like to discuss the enclosed material, please contact me at the following:

W. Richard Green & Associates  
3200 Wilkinson Road  
Cameron Park, Ca 95682  
Telephone: (530) 677-7417  
Facsimile: (530) 677-0971  
E-mail: rich@richgreen.net

Respectfully Submitted

W. RICHARD GREEN

William Richard Green

9-10-08

Date