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RF EXPOSURE MEASUREMENTS

RATELCO NORTH LOT

KUBE-FM, 93.3 MHz & KBTB-FM, 95.7 MHz

AUXILIARY ANTENNAS

3 APRIL 2002

## INTRODUCTION

RF human exposure field measurements were made on March 26, 2002 starting at 10 AM on the auxiliary antennas of KUBE-FM, 93.3 MHz, and KBTB-FM, 95.7 MHz, at the Ratelco north lot on Cougar Mtn. All other facilities in the vicinity were operating at normal licensed power when the measurements were made.

## METHODS AND EQUIPMENT USED

A NARDA Model 8718B Electromagnetic Radiation Survey Meter (sn0001) with a NARDA Model 8742 Isotropic Shaped Electric Field Probe (sn01001) and a NARDA Model B8742D Isotropic Shaped Electric Field Probe (sn05003) were used to make the measurements. The meter was calibrated 12/2001, the 8742 probe was calibrated 6/2001 and the B8742D probe was calibrated 12/2001 by the manufacturer. The NARDA 8742 probe provides an output proportional to the FCC Occupational (Controlled Environment) maximum permissible exposure (MPE) over a frequency range from 300 kHz to 3.0 GHz. The NARDA B8742D probe provides an output proportional to the FCC General Population Environment MPE over a frequency range from 300 kHz to 3.0 GHz. The isotropic response of both NARDA probes is +/-0.75dB. The probe calibration factor at 100 MHz was applied to all readings, for greater accuracy, since fields from FM broadcast antennas were being measured.

The fenced area where the tower is located and accessible areas outside the fence were scanned with the probe and spatially averaged measurements were made at the locations where peak fields were found. Spatial averaged readings were taken from ground level to two meters above ground. Several spatially averaged readings were taken, when necessary, at the location of each peak field in an attempt to minimize the scattering effects of the measurer.

## MEASURED FIELDS

Field hot spots were located near the tower guy anchors and in the center of the north lot. Measured fields in and around the north lot are shown below.

MEASURED FIELDS WITHIN RATELCO NORTH LOT  
KUBE-FM & KBTB-FM AUX. OPERATION, 3-26-02

LOCATION	% FCC OCCUPATIONAL MPE
East Guy Anchor	13%
South West Guy Anchor	10
South East Guy Anchor	17
Guy Anchor South Of Gate	5
Guy Anchor West Of New Bldg.	9
Center Of Lot Between Bldgs.	11

MEASURED FIELDS OUTSIDE OF RATELCO NORTH LOT  
KUBE-FM & KBTB-FM AUX. OPERATION, 3-26-02

LOCATION	% FCC GENERAL PUBLIC MPE
Center road to main gate	45%
Near shed	43
Periphery near fence	<50
West of water tower at metal cover OFCO 1025-18	91
Due east of tower 30' from fence	63
Between power pole and fence due east of tower	85
Grassy area due north of water tower	46
Middle of east/west road south of lot 15' west of white hydrant	81
Mid road east of cross roads at old stump	50
West Edge of road, concrete pipe	96
East side of road at tree south of white hydrant	100

## CONCLUSION

The fenced site and the access road around the site are controlled environments as defined by the FCC. Access to the road is controlled by a locked gate. The measured RF exposure fields in these areas are all below the FCC occupational MPE limits. The measured RF exposure fields in publicly accessible areas near the water tank and the nearest residence are all below the FCC general public MPE limits.

The conclusions of this report are based upon the Commission's environmental requirements in 47 CFR §1.1307 as outlined in *OET Bulletin 65 (Edition 97-01)* . The auxiliary transmitting facilities of KUBE-FM and KBTB-FM will not have a significant environmental impact as defined by §1.1307, which includes consideration of the exposure of workers or the general public to levels of Radio Frequency radiation exceeding guidelines issued by the American National Standards Institute, the Federal Communications Commission, and the National Council on Radiation Protection and Measurements.

3 APRIL 2002

A handwritten signature in black ink, appearing to read "J. Hatfield", written over the typed name below.

James B. Hatfield, P.E.