

**May 2011**  
**WNUE-FM Channel 251C2**  
**Deltona, FL**  
**RF Exposure Study**

**Facilities Proposed**

The proposed operation will be on Channel 251C2 (98.1 MHz) with an effective radiated power of 50 kilowatts. Operation is proposed with an antenna to be installed on a new tower to be constructed nine kilometers east of Osteen, Florida. There are no other broadcast users of this site.

Notice of the proposed tower construction has been filed with the Federal Aviation Administration on FAA Form 7460-1. Upon receipt of the FAA's determination of no hazard, FCC Antenna Structure Registration for the tower will be filed on Form 854, and the resulting Antenna Structure Registration Number will be promptly supplied to the Audio Division.

**RF Exposure Calculations**

The power density calculations shown below were made using the techniques outlined in OET Bulletin No. 65. "Ground level" calculations in this report have been made at a reference height of 2 meters above ground to provide a worst-case estimate of exposure for persons standing on the ground in the vicinity of the tower. The equation shown below was used to calculate the ground level power density figures from each antenna.

$$S(mW / cm^2) = \frac{33.40981 \times AdjERP(Watts)}{D^2}$$

Where: *AdjERP(Watts)* is the maximum lobe effective radiated power times the element pattern factor times the array pattern factor.

*D* is the distance in meters from the center of radiation to the calculation point.

"Worst case" calculations of the power density produced by the proposed antenna system have been made assuming that the antenna will radiate 100% power straight down (i.e. to a point 2 meters above the base of the tower). Under this worst-case assumption, the highest calculated ground level power density occurs at the base of the antenna support structure. At this point the

power density is calculated to be  $161 \mu\text{W}/\text{cm}^2$ , which is 81% of  $200 \mu\text{W}/\text{cm}^2$  (the FCC standard for uncontrolled environments).

The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency radiation in excess of FCC guidelines.