

**Engineering Statement  
In Support of an  
Application for a Construction Permit  
New FM Translator Station, Springville, Alabama**

**Human Exposure To Radiofrequency Radiation Study**

<u>CALL</u>	<u>Service</u>	<u>Channel</u>	<u>Frequency</u>	<u>Polarization</u>	<u>Antenna Height* (AGL)</u>	<u>ERP (kW)</u>	<u>Vertical Relative Field Factor</u>	<u>Predicted Power Density (<math>\mu\text{Wcm}^2</math>)</u>	<u>FCC Uncontrolled Limit (<math>\mu\text{Wcm}^2</math>)</u>	<u>Percent of Uncontrolled Limit</u>
New	FM	222	92.3	H&V	30	0.010	1.000	0.8523	200	0.4261%

Total Percentage of ANSI value = 0.4261%

\* The antenna height indicated above is 2 meters less than the actual antenna height so that the predicted power density consider the 2 meter human height allowance.

The proposed is categorically excluded form environmental processing, as an existing tower is to be used and the proposed facility complies with the FCC Rules concerning human exposure to radiofrequency radiation.

The calculation of power density was made under the procedures of OET Bulletin No. 65 using the following formula:

$$S = (33.41)F^2P / R^2$$

S = power density in  $\mu\text{w}/\text{cm}^2$ , F = relative field factor at the angle to the calculation, P = the total ERP in watts, R = distance from COR to calculation point in meters.

As demonstrated, the total percentage of the ANSI values at the proposed site, considering the radiation of proposed facility is less than 1.0% of the limit for “uncontrolled” environments and “controlled” environments.