

# **GREG BEST CONSULTING, INC.**

9223 N. Manning Avenue  
Kansas City, MO 64157  
816-792-2913

August 16, 2010

Federal Communications Commission  
Media Bureau  
445 12<sup>th</sup> Street SW  
Washington, DC 20554

Dear Sir,

This will serve as the exhibit for the RF Radiation Hazard calculation for this proposed facility.

The RF radiation near the ground (2 meters above ground) can be calculated using the OET-65 formula for broadcast television stations taking into account the following factors

S= power density in watts per square meter

P= total Effective Radiated Power from the antenna

F= field radiated on the axis to the ground level

R= distance to the ground level (actually 2 meters above ground)

Therefore, given the following data for the proposed facility:

P= 15 kwatts

R=Radiation center above ground level – 2 meters)  
= 140 meters

F= 0.1 for UHF antennas

The RF radiation near the ground level can be calculated with the following result:

0.77  $\mu\text{watts/cm}^2$

which is 0.18 % of the general population exposure limit of 423  $\mu\text{w/cm}^2$  for this channel.

In addition to the proposed facilities, there is another source of RF radiation on the same tower. In particular, radiation comes from the authorized facility for WSIE-FM. The contribution from this source is calculated below and then summed with the RF radiation from the proposed facility to get the total RF exposure for this tower.

## **WSIE-FM**

P= 50 kwatts in H-Pol and 41 kW in V-Pol

R=Radiation center above ground level – 2 meters)  
= 126 meters

Using the FCC FM model program with a 6 bay Rototiller type design, the maximum RF exposure is found to be 13.2  $\mu\text{watts/cm}^2$  which is 7.6 % of the maximum limit of 200  $\mu\text{w/cm}^2$  for this frequency.

**TOTAL RF EXPOSURE**

The total RF exposure can be obtained by summing the individual percentages. Thus the total RF exposure predicted is  $0.18 + 7.6 = 7.78$  % of the General Population Exposure limit. This calculation indicates the RF exposure meets the OET-65 requirements.

Should you have any questions regarding this information please contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Raymond B. Smith".

President