



**Refuge Media Group (RMG)**

**Exhibit 22 WJRF RF Exposure Determination**

8/17/2005

RMG proposes a 3 bay ERI V-Pol directional antenna for WJRF. The Center of Radiation will be 80 meters above ground level. KRBR-FM is also on the tower with a 10 bay Jampro antenna and their COR is 104 meters above ground level.

WJRF proposes vertical-only polarization with a maximum ERP of 74 kW.

KRBR-FM operates with circular polarization with an ERP of 100 kW.

The level of RF exposure from these stations is calculated using the formulas found in OET Bulletin 65, 1997 version, and OET Supplement A, also dated 1997. The maximum levels of exposure were taken from the OET Bulletin; these are 1000 uWatt/cm<sup>2</sup> for the occupational exposure level, and 200 uWatt/cm<sup>2</sup> for the general population exposure level.

The formula used for the FM exposure level is:

$$S = 33.4 (F^2)(ERP) / R^2$$

Where:

**F** is a field factor of 0.2 for KRBR; 0.3 for WJRF

**ERP** is the total of both Horizontal and Vertical ERP

**R** is the distance from the Center of Radiation to 2 meters above the ground. (The 2 meters accounts for the height of a person.)

The results are as follows:

<b><u>Station Call</u></b>	<b><u>Radiation Level (uW/cm<sup>2</sup>)</u></b>	<b><u>% Occupational Limit</u></b>	<b><u>% Gen. Pop limit</u></b>
KRBR	25.7	2.6	12.9
WJRF	36.5	3.6	18.2
Totals	62.2	6.2	31.1

The total levels for both stations are well under the maximum permitted exposure levels, therefore the tower complies with the OET exposure requirements.

Also please note this area is controlled in that it has a fence around the building and tower with properly posted signs warning of the RF exposure risk. Persons allowed on the tower are made fully aware of the risks, and can exercise control over their exposure.

Persons passing through the area can readily see the warning signs to keep out of the area.

RMG also certifies that it, in coordination with KRBR-FM (the only other user at the site,) will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines.