

## EXHIBIT 46.1

### COMPLIANCE WITH RADIOFREQUENCY RADIATION GUIDELINES

The proposed WVXF-DT installation will be co-located with other broadcast facilities. The site will, therefore, be considered a “multiple use” site.

The proposed WVXF-DT antenna will consist of panel units manufactured by PSI that have been assembled into a directional array. The array will consist of two levels of panels, and each layer will contain two panel units. PSI has supplied both horizontal plane and vertical plane patterns for the proposed array. This array will replace the existing analog antenna mounted at this location. Therefore, no alteration of the existing Antenna Structure Registration data will be required.

The antenna will be mounted with its center of radiation 18 meters above ground, making it 16 meters above an observer on the ground, who is assumed to be 2 meters tall. A maximum effective radiated power of 4.2 kW (4,200 watts) has been proposed using horizontal polarization.

Equation 10 of OET Bulletin No. 65 can be used to predict the potential exposure to radiofrequency radiation for human observers on the ground as indicated by total power density expressed in units of  $\mu\text{W}/\text{cm}^2$ . This equation states:

$$S = \frac{33.4(F^2)ERP}{R^2}$$

where: S = Total Power Density in units of  $\mu\text{W}/\text{cm}^2$   
 F = Relative Field of Pattern  
 ERP = Effective Radiated Power in Watts  
 R = Distance in Meters

The standard procedure for RF exposure studies considers all locations within 315 meters of the base of the supporting structure. The attached **Exhibit 46.2** uses simple trigonometry to calculate the distance from the tower<sup>1</sup> (“Horizontal Distance”) and from the antenna<sup>2</sup> (“Distance to Observer”) to an observer on the ground for each relevant angle of depression. The relative field for each angle of depression was supplied by the antenna manufacturer. The calculated “Distance to Observer” and supplied relative field values were then used in Equation 10 to calculate the “Power Density” shown in the final column.<sup>3</sup>

<sup>1</sup> Horizontal Distance = 16 / Tan (Depression Angle)

<sup>2</sup> Distance to Observer = 16 / Sin (Depression Angle)

<sup>3</sup> Based on a Maximum ERP = 4200 Watts

The final column has been formatted to show **Bold Italic Green** print whenever the value is less than five percent of the limit for General Public Exposure; **Blue** print is used for values within the General Public Exposure Limit (but greater than five percent of the limit); and **Red** print is used when the value exceeds the Occupational Exposure Limit. Values between the two limits print without any special formatting. Inspection of the final column will show that for all observer locations within 315 meters of the existing tower, the predicted power density will be less than five percent of the General Public Exposure Limit. The predicted values are therefore also less than five percent of the Occupational Exposure Limit.<sup>4</sup>

Chapter 47 of the Code of Federal Regulations, §1.1307(b)(3) states: *“In general, when the guidelines specified in §1.1310 are exceeded in an accessible area due to the emissions from multiple fixed transmitters, actions necessary to bring the area into compliance are the shared responsibility of all licensees whose transmitters produce, at the area in question, power density levels that exceed 5% of the power density exposure limit applicable to their particular transmitter or field strength levels that, when squared, exceed 5% of the square of the electric or magnetic field strength limit applicable to their particular transmitter. Owners of transmitter sites are expected to allow applicants and licensees to take reasonable steps to comply with the requirements contained in §1.1307(b) and, where feasible, should encourage co-location of transmitters and common solutions for controlling access to areas where the RF exposure limits contained in §1.1310 might be exceeded.”* Should the level of radiofrequency radiation at the proposed multiple use site ever exceed the FCC guidelines, the proposed WVXF-DT facility is categorically exempt from responsibility for bringing the shared transmitter site into compliance because its contribution is less than 5.0% of the applicable limit.

The facility is properly marked with signs, and entry is restricted by means of fencing with locked doors and/or gates. Any other means as may be required to protect employees and the general public will be employed. In the event work would be required in proximity to the antenna such that the person or persons working in the area would potentially be exposed to fields in excess of the guidelines, the station will cooperate with other licensees at the site to reduce power or cease operation during the critical period.

---

<sup>4</sup> At the proposed operating frequency, the Occupational Exposure Limit is five times the limit for General Public Exposure.