Engineering Exhibit 30 RF Radiation

ANSI Power Density Calculations

The power density at the base of the tower was calculated using the following formula from OST Bulletin Number 65, August, 1997:

$$S = \frac{(0.64)(1.64)(ERP)(1000)(milliwatts/watt)}{(pi(R)^2)}$$

where: S = power density in milliwatts per square centimeter

ERP = effective radiated power in watts

R = distance to radiation source in centimeters

pi = 3.14

Using this formula and the values shown below, a power density of .008 uW/cm^2 is found to exist at the base of the tower. This predicted value is 0.008 % of the controlled exposure maximum limit of 1 mW/cm^2. There are several other RF facilities located on the tower (WDJT-TV, WTYU-LP and WMLW) and their total contribution was computed and does not exceed the Controlled radiation limit.

ERP = 17.6 kilowatts

R = 27,130 cm.

Access to RF circuitry is restricted by a metal fence that surrounds the property that limits access to the public. Signs are posted warning of the potential danger. When persons require access to the site, tower or antenna for maintenance purposes, the transmitter power will be reduced or completely eliminated to comply with ANSI guidelines. Hence, the conditions of Section 1.1306(b)(3) would not be involved. Since this is a multi-transmitter site measurements will be made after construction to ensure compliance with the radiation requirements. Since this is a multi-transmitter site measurements will be taken after construction to ensure compliance with the exposure standard.