

Environmental Protection Act. - FCC Rule, Section 1.1306

The proposed DTV operation with an ERP of 1000 kW average power on Channel 40 cannot occur till after the analog service has been discontinued since the DTV operation will be done with the present analog transmitter and the antenna does not have the capacity for both operations. Therefore, the analog operation will not be considered in this calculation. Calculations to determine power density levels from the proposed operation were performed using formulas outlined in OET Bulletin 65 (Edition 97-01) based on antenna relative field factor of .1 The formula used is:

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

The antenna is low on the tower; therefore a fence with proper signage surrounds the site at a minimum of 16m from the base of the tower. The center of radiation is at 8.4m above ground. This would give a distance at the fence 2m off the ground from the Center of Radiation of 17.23m. The site is an unpopulated mountaintop with only transient visitors; therefore, the site can be considered occupational/controlled per OET Bulletin 65. The maximum power density levels at two meters above ground level at the fence is 1125.06 $\mu\text{W}/\text{cm}^2$. The maximum allowed by OET 65 bulletin is:

$$\text{Occupational/Controlled Exposure} \\ 629 (\text{Frequency}) / .3 \\ 2,097 \mu\text{W}/\text{cm}^2$$

So, the DTV is 53.65% of the maximum.

In addition, there are two FM Broadcast stations on this tower, KWBI, 1.8 Kw ERP, and KXKL, 100 Kw ERP. Both stations are at 22m above ground with 6-bay antennas and a relative field factor, F, in the downward direction, a maximum of .15 between 17 and 90 degrees. The maximum power density levels at two meters above ground level at the fence for KWBI is 4.1 $\mu\text{W}/\text{cm}^2$. KXKL is 229 $\mu\text{W}/\text{cm}^2$. The maximums for FM are:

$$\text{Occupational/Controlled Exposure General Population} \\ 1,000-\mu\text{W}/\text{cm}^2$$

This means KWBI is at .41% of the maximum for Occupational / Controlled Exposure and KXKL is 22.9%. Since this is a multi transmitter site, we add the percentages together, or 53.65% + .41% +22.9% = 76.96 % of the maximum.

This is a controlled site and the proposed operation will be in compliance with the FCC RF radiation guidelines since areas that exceed the FCC standards will be alerted to workers by posting warning signs and restricting areas. All stations on the tower will have a mutual written agreement and procedures for workers climbing the tower. Transmitter power of each station will be reduced or terminated when workers are near areas on the tower where power density levels are in excess of the FCC standard. An environmental assessment (EA) is categorically excluded under Section 1.1307 of the FCC Rules and Regulations since the applicant indicates:

- (a)(1) The proposed facilities are not located in an officially designated wilderness area.
- (a)(2) The proposed facilities are not located in an officially designated wildlife preserve.
- (a)(3) The proposed facilities will not affect any listed threatened or endangered species or habitats.
- (a)(3)(ii) The proposed facilities will not jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats.
- (a)(4) The proposed facilities will not affect any known districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.

- (a)(5) The proposed facilities are not located near any known Indian religious sites.
- (a)(6) The proposed facilities are not located in a flood plain.
- (a)(7) The side-mounted TV antenna on the existing tower will not involve a significant change in surface features of the ground in the vicinity of the tower.
- (a)(8) The existing tower structure is not equipped with high intensity white lights.
- (b) There will be a security fence with a locked gate to surround the tower. Workers and the general public will not be subjected to RF radiation levels in excess of FCC OET Bulletin 65 (Edition 97-01). Authorized personnel will be alerted to areas of the tower where potential radiation levels are in excess of the FCC standard. The transmitter power will be reduced or terminated when necessary.