Facilities Proposed

The proposed operation will be on Channel 296C3 (107.1 MHz) with an effective radiated power of 0.8 kilowatts. Operation is proposed an antenna to be side-mounted on an existing tower located on Abernathy Mountain.

The proposed antenna support structure will not exceed 60.96 meters (200 feet) above ground and does not require notification to the Federal Aviation Administration. Therefore, this structure does not require an Antenna Structure Registration Number.

NIER Calculations

Study of the area within 1000 meters of the proposed site reveals no other likely sources of non-ionizing radiation. Thus, the ground level NIER values near the base of the proposed structure are believed to be negligible. Precise calculations are made only with regard to the levels from this proposal.

The power density calculations shown below were made using the techniques outlined in OET Bulletin No. 65. "Ground level" calculations in this report have been made at a reference height of 2 meters above ground to provide a worst-case estimate of exposure for persons standing on the ground in the vicinity of the tower. The equation shown below was used to calculate the ground level power density figures from each antenna.

$$S(mW/cm^2) = \frac{33.40981 \times AdjERP(Watts)}{D^2}$$

Where: *AdjERP(Watts)* is the maximum lobe effective radiated power times the element pattern factor times the array pattern factor.

D is the distance in meters from the center of radiation to the calculation point.

"Worst case" calculations of the ground-level power density produced by the proposed facility have been made assuming that the antenna will radiate with 100% power straight down to a location 2

Hatfield & Dawson Consulting Engineers

meters above ground level (25 meters below the antenna radiation center). Under this worst-case assumption, the maximum calculated power density produced at two meters above ground level by the proposed operation of KRQT is 85.5 μW/cm^2, which is 8.6% of 1000 μW/cm^2 (the FCC standard for controlled environments) and 42.8% of 200 μW/cm^2 (the FCC standard for uncontrolled environments).

The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency radiation in excess of FCC guidelines.

Hatfield & Dawson Consulting Engineers