

## **Charles M. Anderson and Associates**

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### **TECHNICAL REPORT**

This technical report has been developed in support of a minor modification to FM station WPKE-FM on channel 276A to implement the change in community of license from Elkhorn City to Coal Run, KY as authorized in MM Docket No. 00-14.

Changes in transmitter site, effective radiated power and HAAT are requested. It is proposed to locate WPKE-FM on the existing tower of WDHR(FM) on 226C2 at Pikeville, KY.

#### **I. ALLOCATION ANALYSIS**

The data for all terrain utilized in this report were obtained from the V-Soft INTERDLG computer program which utilizes the N.G.D.C. thirty (30) second terrain database. The proposed 70 dBu and 60 dBu (50,50) contours and all relevant (50,10) interfering contours were calculated utilizing the same program which is based on the Commission's own F5050 program and data points and which produces contours congruent with Section 73.333 propagation curves.

WPKE-FM be fully spaced at the new site with respect to existing and proposed facilities with the exception of WTCR-FM on 277B (see Exhibit 24 - E-1). Section 73.215 processing is elected with respect to WTCR-FM and a directional antenna is used to prevent prohibited overlap. The actual spacing of 106.69 km is greater than the minimum spacing of 96 km specified by Section 73.215(e).

The proposed facility will clearly place a 70 dBu contour over the entire community of Coal Run in compliance with Section 73.315. An effective radiated power of 1.2 kw is specified at a HAAT of 226 meters to provide the equivalent of a full facility 6 kw/100 meters HAAT class A.

### **III. SITE**

The proposed site is the same as that specified for WDHR(FM) on 226C2 at Pikeville, KY:

**(NAD 27) N 37-27-57 W 82-33-04.**

### **IV. BLANKETING**

The 115 dBu blanketing contour is calculated to be .43 km. The calculation

was made in accordance with the Commission's formula:

$$115 \text{ dBu (km)} = 1.609 [ .245 (\text{P kw})^{1/2}].$$

The applicant accepts the responsibility for correction of any objectionable interference or blanketing problem with Commission rules.

## **V. ANTENNA SYSTEM AND ENVIRONMENTAL CONSIDERATIONS**

The directional antenna antenna will be mounted on the existing WDHR tower. To the applicant's adverse impact will result to any applicable 1.1307 category. Consequently, no environmental statement contributions of the FM stations were calculated utilizing the Commission's FMMODEL program and height ground level, and found to be substantially below the 200 microwatts/cm<sup>2</sup> permissible for general public exposure.

The antenna design meets the Commission's requirements with regard to directional design - less than no more than 2 dB/ ten degrees slope.