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ENVIRONMENTAL IMPACT CONSIDERATIONS
WRCB-DT, CHATTANOOGA, TENNESSEE
CHANNEL 13, 34.8 KW (AVG.), 335 METERS

The site proposed for WRCB-DT use is already employed for broadcasting purposes. Therefore, only the concerns regarding radio frequency radiation exposure to the public and to workers merit attention under the FCC's provisions regarding environmental impact considerations

With regard to radio frequency radiation (rfr) exposure concerns at uncontrolled (general public) access locations, the following is pertinent. The tower that will support the WRCB-DT, Channel 13 (210-216 mHz), antenna, also, will be the supporting tower for the antenna for NTSC station WRCB-TV, Channel 3 (60-66 mHz). The WRCB-TV antenna radiation center will be 127 meters above ground level, and the WRCB-DT antenna radiation center will be 82 meters above ground level. The peak visual effective radiated power for WRCB-TV will be 100 kW. The aural power will be 10% of the peak visual power. As specified herein, the maximum effective radiated power for WRCB-DT will be 34.8 kW (average).

Test calculations have been performed to determine the power density contribution each station will produce relative to the maximum permissible exposure (MPE) at a target 2 meters above ground level at the tower base. The results represent the greatest power density levels that could be expected anywhere at ground level. Using equations given in OST Bulletin 65, the contribution from WRCB-TV would be 2.2% of the 0.2 mW/cm² MPE at Channel 3. In arriving at the foregoing percent contribution, the calculation assumed a 1.6 ground reflection coefficient and a relative field equal to 0.2 of the maximum in the horizontal plane for the WRCB-TV, RCA model TF-6A, antenna that will be employed. The 0.2 relative field value for steep depression angles is consistent with the value suggested in OST Bulletin 65.

For WRCB-DT, the contribution to the MPE will be 5.7%. The MPE is 0.2 mW/cm² on Channel 13. A relative field value of 0.25 was used for steep depression angles for the WRCB-DT antenna. This value was determined from the pattern of Figure 2 of Exhibit 39. The total contribution to the MPE from both stations will be less than 10%, and no question arises of possible overexposure to members of the public at uncontrolled locations.

Insofar as worker exposure concerns are involved the following is pertinent. The tower base will be enclosed by a fence. The fence gate will be kept locked at all times. Only authorized personnel will be

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permitted access within the fenced area. One or more radiation hazard warning signs will be posted on the fence as a further precaution to alert persons to the possibility of high radiation levels. Whenever work must be performed on the tower near any antenna, excitation to the antenna will either be reduced or terminated, as appropriate for the specific work location so as to avoid excessive exposure according to the adopted standard. In the foregoing manner, overexposure of workers to rfr will be avoided.

The foregoing discussion demonstrates that compliance with the FCC's criteria for the avoidance of overexposure at both controlled and uncontrolled locations will be achieved. The proposal does not require an environmental assessment.