

TECHNICAL SUMMARY  
SECOND FILING WINDOW  
APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT  
TV STATION WHTN  
MURFREESBORO, TENNESSEE  
CHANNEL 16 900 KW (ND) 250 m

1. The instant application is a second filing window application for WHTN on channel 16 at Murfreesboro, Tennessee. It is proposed to increase the ERP from 618 kW to 900 kW. There will be no other changes. There will also be no change in the overall structure height of the existing tower (ASRN 1043940).

2. As also indicated in the *TVStudy* analysis, the proposal complies with the FCC's interference protection requirements based on a cell size of 2.0 km and profile resolution of 1.0 points/km.

3. RFR Compliance: The proposed facilities were evaluated in terms of potential radiofrequency radiation (RFR) exposure at ground level to workers and the general public. The radiation center for the proposed DTV antenna will be located 259 meters above ground level. The total DTV ERP is 900 kW (horizontal polarization). A greater than expected vertical plane relative field value of 0.1 is presumed for the antenna's downward radiation (for angles below 60 degrees downward, see attached antenna information). The calculated power density at a point 2 meters above ground level is  $4.6 \text{ uW/cm}^2$  which is 1.4% of the FCC's recommended limit of  $323.3 \text{ uW/cm}^2$  for channel 16 for an uncontrolled environment. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

Access to the transmitting site is restricted and appropriately marked with RFR warning signs. Also, a protocol is in effect in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measure will be taken to assure worker safety with respect to RFR exposure. Such measures include limiting the exposure time, wearing protective clothing, reducing power to an acceptable level or termination of transmitter output power all together until workers leave the restricted area.