

TECHNICAL SUMMARY  
APPLICATION FOR CONSTRUCTION PERMIT  
TV STATION WQHS-DT  
CLEVELAND, OHIO  
CHANNEL 36 360 KW (MAX-DA) 352 m

1. The instant application is the initial 90 day application for the reassigned facilities of WQHS-DT, Cleveland, Ohio (Ch. 36). It is proposed to replace the existing side-mount antenna with a new top-mount antenna. The antenna radiation center height will change from 588.9 meters AMSL to 615.5 meters AMSL. There will be no change in the overall structure height of the existing tower (ASRN 1012992).

2. The proposed maximum directional effective radiated power was adjusted to 360 kW to account for differences in the current and proposed directional antenna patterns and antenna height. There is no extension of the predicted service area relative to the baseline reassignment facility listed in the FCC's *Closing and Reassignment Public Notice*. Also, the proposed facility is compliant with the 95% population service requirement. See attached FCC *TVStudy* analysis exhibit. In addition, the proposal complies with the city coverage requirements as demonstrated in the Predicted Coverage Contours exhibit.

3. As also demonstrated in the *TVStudy* analysis exhibit, 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.

4. 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 304.9 meters above ground level. The total DTV ERP is 450 kW (360 kW-horizontal, 90 kW-vertical). A conservative vertical plane relative field value of 0.1 is presumed for the antenna's downward radiation in both the horizontal and vertical planes of polarization (for angles below 60 degrees downward, see attached antenna information). The calculated power density at a point 2 meters above ground level is  $1.64 \text{ uW/cm}^2$  which is 0.41% of the FCC's recommended limit of  $403.3 \text{ uW/cm}^2$  for channel 36 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, as this is a multi-user site, a formal RFR protection 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.