

TECHNICAL SUMMARY
APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT
TV STATION WOIO
SHAKER HEIGHTS, OHIO
CHANNEL 10 20 KW (ND) 333 m

1. The instant application for WOIO on channel 10 at Shaker Heights, Ohio is filed in response to the FCC's Public Notice which temporarily lifted the freeze on the filing of minor modification applications that expand the contour or full power and Class A TV stations.¹ It is proposed to change the WOIO transmitter site and modify facilities. There will be no change in the overall structure height of the existing tower (ASRN 1012090).

2. As demonstrated in the *TVStudy* analysis exhibit, the proposal complies with the FCC's interference protection requirements based on a cell size of 1.0 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 139 meters above ground level. The total DTV ERP is 30 kW (20 kW horizontal polarization, 10 kW vertical polarization). A conservative vertical plane relative field value of 0.2 is presumed for the antenna's downward radiation (for angles below 65 degrees downward, see attached antenna data). The calculated power density at a point 2 meters above ground level is 0.54 uW/cm^2 which is 0.27% of the FCC's recommended limit of 200 uW/cm^2 for channel 10 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 markets 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,

¹ *Media Bureau Temporarily Lifts the Freeze on the Filing of Minor Modification Applications That Expand the Contour of Full Power and Class A Television Stations from November 28 Through December 7, 2017*, Public Notice, DA 17-1086 (released November 6, 2017).

reducing power to an acceptable level or termination of transmitter output power all together until workers leave the restricted area.