

TECHNICAL SUMMARY
SPECIAL DISPLACEMENT WINDOW
APPLICATION FOR CONSTRUCTION PERMIT
LOW POWER TV STATION WQTV-LP
MURRAY, KENTUCKY
CHANNEL 28 15 KW (ND)

1. Application Purpose: The instant application is a special displacement window application for WQTV-LP currently on channel 24 at Murray, Kentucky (FCC File No. BLTTL-20010425AAF).¹ As detailed below, WQTV-LP is eligible for displacement due to impermissible interference caused to the authorized operation of Class A station WUWT-CD on repacked channel 24 at Union City, Tennessee (LMS File No. 0000028231). Therefore, it is proposed to operate WQTV-LP on “in core” channel 28 with a maximum effective radiated power (ERP) of 15 kW using a Dielectric model TLP-16TLP(C)/VP elliptically polarized nondirectional antenna. The antenna radiation center height will be 325.3 m AMSL. There will be no change in the overall structure height (ASRN 1044609).

2. Eligibility to File in Special Displacement Window: Station WQTV-LP is eligible to file in the special displacement window as it was operating with its currently licensed facilities (FCC File No. BLTTL-20010425AAF) prior to April 13, 2017 – the release date of the *Closing and Channel Reassignment Public Notice*.² In addition, WQTV-LP is considered to be displaced due to impermissible interference caused to the authorized operation of Class A station WUWT-CD on repacked channel 24 at Union City, Tennessee (LMS File No. 0000028231). Specifically, as indicated by the attached *TVStudy* analysis summary, WQTV-LP’s licensed channel 24 operation is predicted to cause 1.6% new interference to WUWT-CD (up to 0.5% new interference is permitted).

3. Interference Compliance: As indicated in the attached *TVStudy* analysis, WQTV-LP’s proposed channel 28 displacement operation meets the FCC’s interference protection requirements with respect to all protected facilities based on both a pre-transition

¹ See FCC Public Notice dated February 9, 2018 entitled “*Incentive Auction Task Force and Media Bureau Announce Post-Incentive Auction Special Displacement Window April 10, 2018 through May 15, 2018 and Make Location and Channel Data Available*” (DA 18-124, MB Docket No. 16-306, GN Docket No. 12-268) (“FCC Special Displacement Window PN”).

² See *Media Bureau Announces Date by Which LPTV and TV Translator Stations Must Be “Operating” In Order to Participate In Post-Incentive Auction Special Displacement Window, Public Notice*, 31 FCC Rcd 5383 (MB 2016).

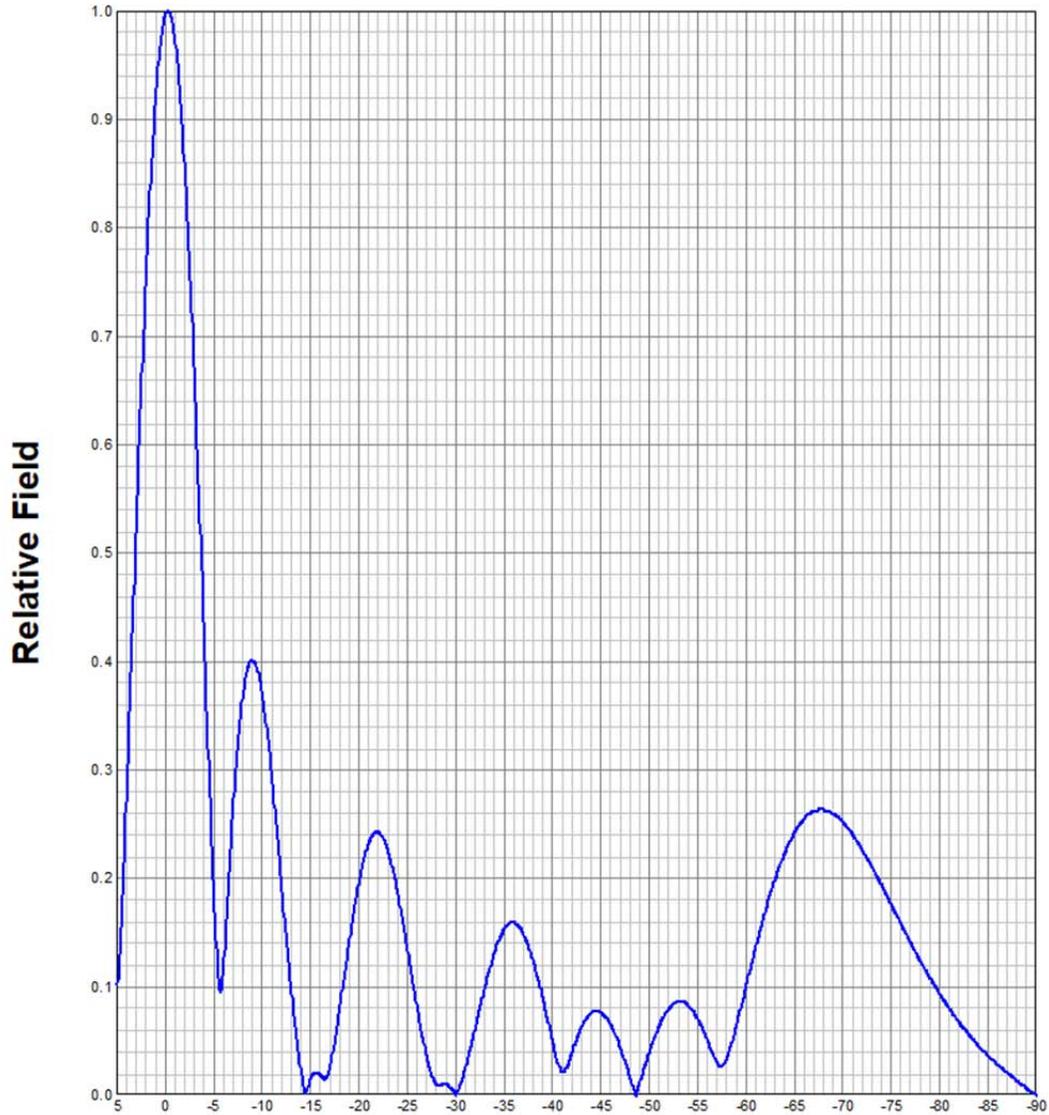
and post-transition environment. A cell size of 1.0 km and a profile resolution of 1.0 points/km were utilized for the *TVStudy* analysis.

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 161.6 meters above ground level. The total DTV ERP is 21.4 kW (15 kW horizontal polarization, 6.4 kW vertical polarization). A greater than expected vertical plane relative field value of 0.2 is presumed for the antenna's downward radiation (-60° to -90° elevation, see attached elevation pattern). The calculated power density at a point 2 meters above ground level is 1.12 uW/cm² which is 0.3% of the FCC's recommended limit of 371.3 uW/cm² for channel 28 for an uncontrolled environment. Thus, it is believed that the WQTV-LP facility is in full compliance with the FCC's requirements with regard to radio frequency radiation exposure.

Access to the transmitting site will be restricted and appropriately marked with RFR warning signs. Furthermore, as this is a multi-user site, a formal RFR protection protocol will be in effect in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measures 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.

ELEVATION PATTERN

Type:	ALP8M1		Channel:	24
Directivity:	Numeric	dBd	Location:	
Main Lobe:	9.05	9.57	Beam Tilt:	-0.25
Horizontal:	9.00	9.54	Polarization:	Horizontal



Preliminary, subject to final design and review.