TECHNICAL SUMMARY
STA REQUEST
LOW POWER DIGITAL STATION WBQC-LD
CINCINNATI, OHIO
CHANNEL 20 15 KW (DA)

1. The instant application is for an STA to operate WBQC-LD on in core, pre-transition channel 20 at Cincinnati, Ohio with a directional antenna maximum effective radiated power (ERP) of 15 kW using a Scala model SL-8 (Antenna ID 23503) horizontally polarized directional antenna oriented at 0° true. The antenna radiation center height will be 464.3 m AMSL. There will be no change in the overall structure height of the existing structure (ASRN 1013618). Figure 1 demonstrates that the 51 dBu, f(50,90) contour for the proposed channel 20 operation will not extend beyond the 51 dBu, f(50,90) contour for WBQC-LD's currently licensed operation on channel 47 (BLDTL-20081201DCM).

2. Background: As noted in the attached Justification for Special Temporary Authority ("STA Justification"), channel 20 was previously occupied by DWOTH-CD, FID 168414 (originally WOTH-LD), but sold in the incentive auction and shut down earlier this year. That station's equipment is still in place so WBQC-LD can operate on channel 20 on a temporary basis using WOTH-LD's previously licensed channel 20 facilities without new construction.

3. Eligibility/Pre-Transition Channel Availability: WBQC-LD received a 120 day letter from T-Mobile indicating that the current WBQC-LD operation on channel 47 would likely interfere with its new 600 MHz band license. Therefore, pursuant to the FCC's Public Notice dated June 14, 2017 entitled "*Incentive Auction Task Force and Media Bureau Set Forth Tools Available to LPTV/Translator Stations Displaced Prior to the Special Displacement Window*" (DA 17-584, MB Docket No. 16-306, GN Docket No. 12-268), WBQC-LD is eligible to submit this STA to operate on channel 20 which is currently an available pre-transition channel as demonstrated below. It is noted that WBQC-LD currently has a pending displacement application which proposes post-transition operation on channel 28 (LMS File No. 0000052535). The WBQC-LD channel 28 displacement application also contains a request for waiver of the contingent application rule (Section 73.3517) as channel 28 is a currently precluded from use by WPTO-TV on channel 28 at Oxford, Ohio (FID 25065). Channel 28 will become available when WPTO-TV moves to channel 29 per LMS File No. 0000034602 (transition date October 18, 2019).

4. Interference Compliance: As indicated in the attached "pre-transition" *TVStudy* analysis report summary, WBQC-LD's proposed channel 20 displacement operation meets the FCC's interference protection requirements with respect to all protected facilities based on a pre-transition allocation environment with the exceptions of W20CT-D on channel 20 at Augusta, Kentucky (FID 167571) and WLWD-LD on channel 20 at Springfield, Ohio (FID 68026). However, as indicated in the attached STA justification, WOTH-LD's use of channel 20 was first in time and, therefore, W20CT-D and WLWD-LD accepted incoming interference from WOTH-LD. Thus, the temporary pre-transition operation of WBQC-LD on channel 20, with the same facilities as previously licensed to WOTH-LD, will not cause any more interference than the stations previously accepted.

As indicated in the attached "post-transition" *TVStudy* analysis report summary, WBQC-LD's proposed channel 20 displacement operation does not comply with the FCC's post-transition interference protection requirements to WLWT on channel 20 at Cincinnati, Ohio (FID 46979, LMS File No. 0000034359). The transition date for WLWT is October 18, 2019. Therefore, the applicant will cease transmitting on channel 20 prior to the initiation of post-transition channel 20 operation by WLWT.[1]

5. 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 207 meters above ground level. The total DTV ERP is 15 (horizontal polarization). A worst case vertical plane relative field value of 1 is presumed for the antenna's downward radiation (-60° to -90° elevation). The calculated power density at a point 2 meters above ground level is 11.9 uW/cm^2 which is 3.5% of the FCC's recommended limit of 339.3 uW/cm^2 for channel 20 for an uncontrolled environment.

Access to the transmitting site will be restricted and appropriately markets with RFR warning signs. Furthermore, 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.

[1] It is noted that a cell size of 1.0 km and profile point resolution of 1.0 km were utilized for the *TVStudy* analyses.