

TECHNICAL SUMMARY  
SPECIAL TEMPORARY AUTHORITY REQUEST  
LOW POWER TV STATION W42AE  
POUGHKEEPSIE, NEW YORK  
DIGITAL CHANNEL 23 1.2 KW (DA)

1. The instant application is a special temporary authority (STA) request for W42AE currently on “out-of-core” analog channel 42 at Poughkeepsie, New York (BLTTL-20040225AAW). It is proposed to change site and operate on “in core” digital channel 23 with a maximum effective radiated power (ERP) of 1.2 kW using a Dielectric model TLP8-N horizontally polarized directional antenna with a main lobe orientation of 90 degrees true and 1 degree of electrical beam tilt. A full service emission mask will also be employed. The antenna radiation center height will be 450 m AMSL. There will be no change in the overall structure height of the proposed tower (ASRN 1061739). The proposed W42AE STA facilities are identical to the W42AE facilities set forth in a pending displacement application for channel 23 (LMS File No. 0000052611, as amended) with the exception that the maximum ERP is reduced from 11 kW to 1.2 kW in order to comply with the pre-transition allocation environment. Furthermore, it is noted that while W42AE currently holds a license to operate in the analog mode, the instant STA, and pending displacement application, propose that the station operate in the digital mode. The Commission has, in numerous other instances, authorized a licensed analog station to operate in the digital mode under the terms of an STA.

2. Eligibility: W42AE received a 120 day letter from T-Mobile indicating that the current W42AE operation 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), W42AE is eligible to submit this STA to operate with the facilities set forth in its pending displacement application for channel 23, with the exception that the maximum ERP is reduced from 11 kW to 1.2 kW in order to comply with the pre-transition allocation environment.

3. Interference Compliance: As indicated in the attached *TVStudy* analysis, W42AE's proposed channel 23 STA operation meets the FCC's interference protection requirements with respect to all protected facilities based on both a pre-transition and post-transition environment. Specifically, the proposal will not cause interference to the predicted service of: (1) all other primary users in the repacked TV Band or in adjacent bands including land mobile operations, (2) licenses and valid construction permits for LPTV stations, (3) licenses and valid construction permits for full power and Class A stations that were not reassigned, and (4) the post-auction channels of reassigned full power and Class A stations as reflected in the *Closing and Reassignment Public Notice*. A cell size of 1.0 km and a profile resolution of 0.1 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 114 meters above ground level. The total DTV ERP is 1.2 kW (horizontal polarization). A worst-case vertical plane relative field value of 1.0 is presumed for the antenna's downward radiation ( $-60^{\circ}$  to  $-90^{\circ}$  elevation). The calculated power density at a point 2 meters above ground level is  $3.2 \text{ uW/cm}^2$  which is 0.9% of the FCC's recommended limit of  $351.3 \text{ uW/cm}^2$  for channel 23 for an uncontrolled environment.

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 is 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.