

TECHNICAL SUMMARY  
APPLICATION FOR CONSTRUCTION PERMIT  
STATION WMDO-CD  
WASHINGTON, DC  
CHANNEL 14 15 KW (MAX-DA)

1. The instant application is a channel sharing application for WMDO-CD (Facility ID 38437, the “sharee”). The “sharer” station will be WWTD-LD at Washington, DC (Facility ID 189114) using WWTD-LD’s post-auction/licensed channel 14 facilities (FCC File No. BLDL-20140320ADR). Specifically, WMDO-CD will operate on digital channel 14 with a directional antenna maximum effective radiated power (ERP) of 15 kW utilizing a PSI model PSILP16OI directional antenna (antenna ID 20399) having a main lobe orientation of 170 degrees true with an antenna center of radiation of 242.9 meters AMSL.

2. Compliance with 74.787(b)(1)(iii): The proposed WMDO-CD channel share operation will be located less than 30 miles from the currently licensed WMDO-CD channel share operation (FCC File No. 0000167891).

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 is located 125 meters above ground level on the existing tower (ASRN 1036610). The total DTV ERP is 15 kW (horizontal polarization). A greater than expected vertical plane relative field value of 0.1 is presumed for the antenna’s downward radiation (for angles below 60 degrees downward, see vertical plane relative field pattern attached as Figure 1). The calculated power density at a point 2 meters above ground level is  $0.33 \text{ uW/cm}^2$  which is 0.11% of the FCC’s recommended limit of  $315.3 \text{ uW/cm}^2$  for channel 14 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. 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.

Figure 1

