

TECHNICAL SUMMARY
STA REQUEST
LOW POWER DIGITAL STATION KDTF-LD
SAN DIEGO, CALIFORNIA
CHANNEL 16 15 KW (DA)

1. The instant application is for an STA to operate KDTF-LD on in-core, pre-transition channel 16 at San Diego, California with a directional antenna maximum effective radiated power (ERP) of 15 kW using a SBP model UPSL horizontally polarized directional antenna oriented at 240° true. The antenna radiation center height will be 806 m AMSL. There will be no change in the overall structure height of the existing structure (no ASRN).

2. Eligibility/Pre-Transition Channel Availability: KDTF-LD received a 120 day letter from T-Mobile indicating that the current KDTF-LD operation on channel 51 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), KDTF-LD is eligible to submit this STA to operate on channel 16 which is currently an available pre-transition channel. It is noted that KDTF-LD currently has a pending displacement application which proposes post-transition operation on channel 25 (LMS File No. 0000053785).

3. Interference Compliance: As indicated in the attached *TVStudy* analysis, KDTF-LD's proposed channel 16 STA operation meets the FCC's interference protection requirements with respect to all protected facilities based on both the pre- and post-transition allocation environments. A cell size of 1.0 km and a profile resolution of 1 km points/km were utilized for the *TVStudy* analysis. As demonstrated in the Land Mobile Protection Map, the proposal meets the contour protection requirements outlined in Section 74.709 of the FCC Rules with respect to the Los Angeles Land Mobile assignments on Channels 15 and 16.

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 antenna will be located 25 meters above ground level. The total average digital ERP is 15 kW (horizontal polarization). A greater than expected vertical plane relative field value of 0.2 is presumed for the antenna's steep downward radiation (-63° to -90° elevation). The calculated power density at a point 2 meters above ground level is 37.9 uW/cm², which is 11.7% of the FCC's recommended limit of 323.3 uW/cm² for channel 16 for an uncontrolled environment. If necessary, RF measurements will be made to ensure that the level is within recommended limits.

Access to the transmitting site shall 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.