

TECHNICAL SUMMARY  
FIRST PRIORITY WINDOW  
APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT  
FCC FILE NO. 0000025102  
TV STATION KTFD-DT  
BOULDER, COLORADO  
CHANNEL 32 1000 KW (DA) 363 m

1. This is a first priority window application for modification of construction (FCC File No. 0000025102) for KTFD-DT at Boulder, Colorado (facility ID 57219). Station KTFD-DT is eligible to file for expanded facilities during the first priority window as KTFD-DT is one of the stations identified by the FCC that is predicted to lose more than 1% of its pre-auction interference-free population. Attached is that portion of the FCC's CSV file which identified stations predicted to lose more than 1% of their pre-auction interference-free population which includes KTFD-DT (shown in boldface).

2. It is proposed to increase KTFD-DT's authorized ERP from 395 kW to 1000 kW and to change the antenna make and model. No other changes in KTFD-DT's authorized technical facilities are proposed. There will also be no change in the overall structure height of the existing tower (ASRN 1023484).

3. As indicated by the attached FCC *TVStudy* analysis, the proposed KTFD-DT operation complies with the 0.5 percent interference criteria to all pertinent facilities. As also indicated in the *TVStudy* analysis, the proposed facility is compliant with the 95% population service requirement. Therefore, it is believed that the proposed facilities comply with the technical requirements applicable to a first priority window applicant. Also, the proposal complies with the city coverage requirements as demonstrated in the Predicted Coverage Contours exhibit.

4. Regarding the Table Mountain receiving zone, a request for coordination has been submitted to Table Mountain frequency manager and a copy of the coordination request is attached.

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 54 meters above ground

level. The total DTV ERP is 1283 kW (1000 kW-horizontal, 283 kW-vertical). A conservative vertical plane relative field value of 0.087 is presumed for the antenna's downward radiation in both the horizontal and vertical planes of polarization (for angles below 60 degrees downward, see attached antenna data). The calculated power density at a point 2 meters above ground level is  $120.0 \text{ uW/cm}^2$  which is 31% of the FCC's recommended limit of  $387.3 \text{ uW/cm}^2$  for channel 32 for an uncontrolled environment. It is noted that this is a reduction in the calculated power density as compared to the current KTFD-DT operation (BLCDT-20110812AAS) which has a calculated power density at a point 2 meters above ground level of  $134 \text{ uW/cm}^2$  or 41.8% of the FCC's recommended limit (see Attachment 46/Environmental Considerations to BPCDT-20080619ADV).

The tower base is fenced and marked with RFR warning signs. Additional RFR signs mark areas of this remote, uninhabited mountaintop site where excessive exposure may occur, based upon field RFR survey. Furthermore, the site is periodically surveyed for RFR changes. In addition, 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.