

TECHNICAL SUMMARY  
AMENDMENT TO  
APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT  
FCC FILE NO. 0000029929  
TV STATION KCEC  
BOULDER, COLORADO  
CHANNEL 32 1000 KW (DA) 363 m

1. This is an amendment to the pending first priority window application for modification of construction permit (FCC File No. 0000029929) for KCEC at Boulder, Colorado (facility ID 57219).<sup>1</sup> The purpose of this amendment application is to rotate the directional antenna 28.5 degrees clockwise in order to match the field strength at Table Mountain for KCEC's licensed and baseline facilities (see "Table Mountain Protection" below). No other changes are proposed. There will also be no change in the overall structure height of the existing tower (ASRN 1023484).

2. Table Mountain Protection: As indicated by the attached FCC *TVStudy* analysis reports, the field strengths at Table Mountain for KCEC's current license, baseline and herein proposed operation are all 99.6 dBu (95.9 mV/m). As such, it is believed that the proposed KCEC operation will be successfully coordinated with Table Mountain. A request for coordination has been submitted to the Table Mountain frequency manager and a copy of the coordination request is attached.

3. As also indicated by the attached FCC *TVStudy* analysis, the proposed KCEC operation complies with the 0.5 percent interference criteria to all pertinent facilities. 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 attached as Figure 1.

4. Freeze Compliance: Figure 1 also shows the Noise Limited Service Contours ["NLSC", 40.5 dBu, f(50,90)] for the pending application and herein proposed KCEC operation. As indicated, there is some minor extension of the proposed NLSC outside of the

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<sup>1</sup> As noted in the pending 1<sup>st</sup> priority window application, KCEC is eligible to file for expanded facilities during the first priority window as KCEC 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 KCEC (shown in boldface).

pending application NLSC. However, as the extension occurs as a result of providing the requisite protection of Table Mountain, it is believed to comply with the intent of the FCC's 4/05/2013 Freeze Order Public Notice (DA 13-618). If necessary, a waiver of the Freeze Order is respectfully requested.

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 uW/cm<sup>2</sup> which is 31% of the FCC's recommended limit of 387.3 uW/cm<sup>2</sup> 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 KCEC operation (BLCDT-20110812AAS) which has a calculated power density at a point 2 meters above ground level of 134 uW/cm<sup>2</sup> 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.