

TECHNICAL SUMMARY
APPLICATION FOR CONSTRUCTION PERMIT
CLASS A STATION KGHB-CD
PUEBLO, COLORADO
CHANNEL 21 11.5 KW (DA)

1. The instant application is the initial 90 day 'checklist' application for the reassigned facilities of KGHB-CD, Pueblo, Colorado (Ch. 21). It is proposed to replace the existing side-mount antenna with a new side-mount antenna. There will be no change in the antenna radiation center height (1649 m AMSL). There will also be no change in the overall structure height (ASRN 1237865).

2. The proposed maximum directional effective radiated power was adjusted to 11.5 kW to account for differences in the current and proposed directional antenna patterns. Although there is some extension of the predicted service area relative to the baseline reassignment facility listed in the FCC's *Closing and Reassignment Public Notice*, the extension will not exceed 1% in any direction. The proposed facility is also compliant with the 95% population service requirement. See attached FCC *TVStudy* analysis exhibit.

3. As also indicated in the *TVStudy* analysis, the proposal complies with the FCC's interference requirements based on the FCC's *TVStudy* program. A cell size of 2.0 km and a profile resolution of 1.0 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 24 meters above ground level. The total DTV ERP is 13.2 (11.5 kW-Horizontal, 1.7 kW-Vertical). A greater than expected vertical plane relative field value of 0.25 is presumed for the antenna's downward radiation (see attached antenna information). The calculated power density at a point 2 meters above ground level is 56.9 uW/cm² which is 16.6% of the FCC's recommended limit of 343.3 uW/cm² for channel 21 for an uncontrolled environment.

However, as this is a multi-user site all existing and authorized broadcast facilities in the vicinity must be considered in the RFR evaluation. In addition to KGHB-CD, LPTV station KTLP-LP (BLTTL-20100505AHF), FM station KCFP (BLED-19960618KA) and FM

translator stations K228EY (BLFT-20090408AEP) and K247BP (BLFT-20150415ABB) operate from the proposed location. The power density for KTLP-LP was calculated to be 0.6% of the limit based on an antenna height above ground level (AHAGL) of 30 meters, a visual ERP of 1.2 kW, 10 percent aural power and a conservative vertical plane relative field value of 0.2. The power density for KCFP was calculated to be 1.5% of the limit based on an AHAGL of 87 meters, a total ERP of 0.6 kW (H) and a worst-case vertical relative field value of 1.0. The power density for K228EY was calculated to be 0.4% of the limit based on an AHAGL of 60 meters, a total ERP of 0.082 kW (H) and a worst-case vertical relative field value of 1.0. The power density for K247BP was calculated to be 1.5% of the limit based on an AHAGL of 77 meters, a total ERP of 0.5 kW (H) and a worst-case vertical relative field value of 1.0. The summation of the above fractions of the ANSI limit for each of the stations is 0.206. Since this is less than unity, the combined power density at 2 meters above ground level will be less than the ANSI recommended limit applicable to general population/uncontrolled exposure areas. Thus, it is believed that the KGHB-CD facility is in full compliance with the FCC's requirements with regard to radio frequency radiation exposure.

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.