



**STATEMENT OF JOHN E. HIDLE, P.E.  
IN SUPPORT OF AN APPLICATION FOR A  
CONSTRUCTION PERMIT TO SPECIFY CHANNEL 20  
IN LIEU OF CHANNEL 6 IN THE DIGITAL  
TELEVISION TABLE OF ALLOTMENTS  
KTVM-TV - BUTTE, MONTANA  
DTV - CH. 20 - 1000 kW - 591.3 m HAAT**

Prepared for: Sinclair Media Licensee, LLC

I am a Consulting Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission. I am a Licensed Professional Engineer in the Commonwealth of Virginia, No. 7418, and in New York State, No. 63418.

**GENERAL**

This office has been authorized by Sinclair Media Licensee, LLC, licensee of KTVM-TV, channel 6, licensed to Butte, Montana, to prepare this statement, FCC Form 2100, Schedule A, its technical sections, and the associated exhibits in support of an application for a minor change construction permit to specify channel 20 in lieu of channel 6 as ordered in the REPORT AND ORDER in MB Docket No. 21-185, DA 21-847.

**NON-DIRECTIONAL ANTENNA**

The applicant intends to install a Dielectric model TFU-33ETT/VP-R O6 elliptically polarized non-directional antenna. The antenna's center of radiation will be located at a height above ground of 53.3 meters, and a height above average terrain of 591.3 meters. The antenna's horizontal azimuth radiation patterns for both its horizontally and vertically polarized components and its vertical elevation pattern, showing its radiation characteristics above and below the horizontal plane are shown and tabulated in the antenna exhibit.

## **PREDICTED COVERAGE CONTOURS**

The predicted coverage contours were calculated in accordance with the method described in Section 73.625(b) of the Rules, utilizing the appropriate F(50,90) propagation curves (47 CFR Section 73.699, Figure 9), proposed Effective Radiated Power, and antenna height above average terrain as determined for each profile radial. The average terrain on the eight cardinal radials from 3 kilometers to 16 kilometers from the site, was determined using the NED Three Second US Terrain Database as permitted in the FCC Rules. The antenna site elevation and coordinates were determined from FCC antenna registration data. The map exhibit shows the predicted Noise Limited (39.36 dBu) contour, and the principal community (48 dBu) contour which completely encompasses the principal community of license, Butte, Montana.

## **DETERMINATION OF THE “LARGEST STATION IN THE MARKET”**

An analysis of the stations licensed to communities located in the Butte-Bozeman, Montana Designated Market Area (DMA) shows the largest station in geographic area is KXLF-TV for channel 5, Butte, Montana with a predicted 28 dBu noise limited contour coverage area of 49,485.5 square kilometers. The instant application to change KTVM-TV's channel to 20 with an ERP of 1000 kW results in a predicted 39.36 dBu noise limited contour coverage area of 47,262.4 square kilometers. KTVM-TV is therefore entitled, according to Section 73.622(f)(5), to the proposed channel 20 ERP of 1000 kW.

## **ALLOCATION CONSIDERATIONS**

### ***Post-Transition DTV Considerations***

A study was performed, using the FCC's software, *tvstudy v2.2.5*, to determine if the instant petition to amend the post-transition Table is predicted to cause new prohibited interference to DTV stations, construction permits or DTV allotments. Results of the study indicate that the instant petition is predicted to cause no new interference greater than 0.5% to the populations served by any full-power DTV station, construction permit or allotment. See Appendix B. These results comply with the 0.5% limit for new post-repack interference set forth in §73.616(e) of the Commission's Rules.

### ***International DTV Considerations***

The KTVM-TV site is located 332.5 kilometers from the nearest point on the US-Canadian border and the 24.36 dBu contour crosses the Canadian border therefore coordination is required. There is vanishingly small probability that the current proposal will have any effect on any Canadian television facility. The Mexican border is 1489.8 km from KTVM-TV's site.

### ***Class A Television Allocation Considerations***

As required in Section 73.616(f) of the FCC's Rules, the study results contained in Appendix B showed that there is no Class A station that is predicted to be affected by the proposed re-allotment of KTVM-TV to channel 20.

### ***Land Mobile and FM radio Considerations***

The *tvstudy* results found no Land Mobile violations for this site.

## **BLANKETING AND INTERMODULATION INTERFERENCE**

Other broadcast and non-broadcast facilities are either co-located with, or located within 10 kilometers of the KTVM-TV site. The applicant does recognize its responsibility to remedy complaints of interference that might result from this proposal in accordance with applicable Rules.

## **RADIO FREQUENCY IMPACT, SAFETY & STATEMENT OF COMPLIANCE**

The licensee of KTVM-TV is committed to the protection of station personnel and/or tower contractors working in the vicinity of the KTVM-TV antenna and will reduce power or cease operation, when necessary, to ensure protection to personnel.

As shown in Appendix A the KTVM-TV channel 20 facility, as proposed herein, will operate with a maximum ERP of 1000 kW from an elliptically polarized non-directional transmitting antenna with a centerline height of 53.3 meters above ground level (AGL). Considering the elevation pattern provided elsewhere in this submission, the vertical plane relative field factor is less than 0.100 at all depression angles greater than 8 degrees. The proposed KTVM-TV channel 20 facility is predicted to produce a worst-case power density at two meters above ground level, at 35.9 meters from the tower base, of  $9.811 \mu\text{W}/\text{cm}^2$ , which is 2.89% of the FCC guideline value of  $339.33 \mu\text{W}/\text{cm}^2$  for an "uncontrolled" environment, and 0.578% of the FCC's guideline value for "controlled" environments. Therefore, pursuant to Section 1.1307(b)(3) of the FCC Rules, because the proposed facility would not exceed 5% of the uncontrolled and controlled exposure limits, the proposal's power density contribution is considered insignificant. Further, the Applicant will

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continue to cooperate/coordinate with other site users and reduce power and/or cease operation during times of service or maintenance of the transmission systems as necessary to avoid potentially harmful exposure to personnel. In light of the above, the proposed facility should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Commission's Rules.

**SUMMARY**

It is submitted that the instant application for construction permit for KTVM-TV to broadcast on channel 20 in lieu of channel 6, as described herein, complies with the Rules, Regulations and relevant Policies of the Federal Communications Commission. This statement was prepared by me, or under my direct supervision, and its contents are believed to be true and correct to the best of my knowledge and belief.

DATED: August 4, 2021

  
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John E. Hidle, P.E.



The seal is circular with a blue border containing the text "COMMONWEALTH OF VIRGINIA" at the top and "PROFESSIONAL ENGINEER" at the bottom. In the center, it reads "J E HIDLE" and "Lic. No. 007418".