



**STATEMENT OF JOHN E. HIDLE, P.E.  
IN SUPPORT OF AN APPLICATION FOR A  
MINOR MODIFICATION OF CONSTRUCTION  
PERMIT, FILE NUMBER 0000153318, TO SUBSTITUTE  
A DIFFERENT ANTENNA, A NON-DIRECTIONAL  
DIELECTRIC MODEL TFU-32GTQ/VP-R O8 BB FOR ITS  
AUTHORIZED NON-DIRECTIONAL ANTENNA  
A DIELECTRIC MODEL TFU-30ETT/VP-R O6  
KBOI-TV - BOISE, IDAHO  
CH. 20 - 625 kW - 859 meters HAAT**

Prepared for: Sinclair Boise 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 Boise Licensee, LLC, licensee of KBOI-TV, channel 9, licensed to Boise, Idaho, 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 to its construction permit that specifies channel 20, file number 0000153318. The proposed minor change includes the substitution of a new Dielectric model TFU-32GTQ/VP-R O8 BB non-directional antenna in lieu of its authorized antenna, a non-directional Dielectric model TFU-30ETT/VP-T O6 and a slight reduction in HAAT of 4 meters to accommodate the proposed new antenna. The proposed substitute antenna is designed to additionally accommodate two other full-power DTV facilities and one Low-Power DTV facility that are already located at the site.

The applicant intends to install the proposed substitute elliptically polarized antenna with its center of radiation at a height above ground of 90 instead of 94 meters, and a height above average terrain of 859 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, Boise, Idaho.

#### **DETERMINATION OF THE "LARGEST STATION IN THE MARKET"**

It appears from an analysis of the stations that are licensed to communities located in the Boise, Idaho Designated Market Area (DMA) that the largest station in geographic area is the KTVB, license file number, BLCDT-20100628AVP, for channel 7, Boise, Idaho

with a predicted 36 dBu noise limited contour coverage area of 55,422.7 square kilometers. The instant application to modify KBOI-TV's channel 20 construction permit to substitute a different antenna with an ERP of 625 kW results in a predicted 39.36 dBu noise limited contour coverage area of 53,288.8 square kilometers. KBOI-TV is therefore entitled, according to Section 73.622(f)(5), to the herein authorized channel 20 ERP of 625 kW.

### **ALLOCATION CONSIDERATIONS**

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

A study was performed, using the FCC's software, *tvstudy v2.2.5*, to determine that the instant proposal is predicted to cause no new prohibited interference to DTV stations, construction permits or DTV allotments. The study results confirm no new interference is predicted to more than 0.5% to the populations served by any full-power DTV station, construction permit or allotment. See Appendix B.

### **BLANKETING AND INTERMODULATION INTERFERENCE**

Other broadcast and non-broadcast facilities are either co-located with, or located within 10 kilometers of the KBOI-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 KBOI-TV is committed to the protection of station personnel and/or tower contractors working in the vicinity of the KBOI-TV antenna and will reduce power or cease operation, when necessary, to ensure protection to personnel.

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As shown in Appendix A the KBOI-TV channel 20 facility, as proposed herein, will operate with a maximum ERP of 625 kW from an elliptically polarized non-directional transmitting antenna with a centerline height of 90 meters above ground level (AGL). Considering the elevation pattern provided elsewhere in this submission, the vertical plane relative field factor is less than 0.140 at all depression angles greater than 10 degrees. The proposed KBOI-TV channel 20 facility is predicted to produce a worst-case power density at two meters above ground level, at 23.6 meters from the tower base, of  $31.22 \mu\text{W}/\text{cm}^2$ , which is 9.20% of the FCC guideline value of  $339.33 \mu\text{W}/\text{cm}^2$  for an "uncontrolled" environment, and 1.84% of the FCC's guideline value for "controlled" environments.

Since the proposed facility's worst-case predicted power density would exceed 5% of the uncontrolled environment at one location less than 25 meters from the support tower base the proposal does not qualify for treatment pursuant to Section 1.1307(b)(3) of the FCC Rules. Even so, the applicant believes that only one isolated location within the restricted boundary of the common site with predicted power density of 9.2% of the "uncontrolled" public exposure guideline can in no known or imagined situation present danger to anyone that would be authorized to have access to the restricted site.

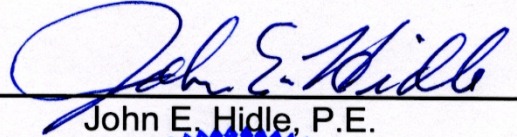
However, the applicant is prepared, if required, to make on-site measurements in conjunction with other occupants of the site. Further, the Applicant will continue to cooperate/coordinate with other site users and reduce power and/or cease operation during times of service or maintenance of the transmission systems as necessary to avoid potentially harmful exposure to personnel.

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**SUMMARY**

It is submitted that the instant application for a minor modification of KBOI-TV's channel 20 construction permit, file number 0000153318, to substitute a different non-directional elliptically polarized antenna for its authorized antenna 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: November 13, 2023

  
John E. Hidle, P.E.

