

COMPREHENSIVE TECHNICAL EXHIBIT

Western Inspirational Broadcasters, Inc.  
Application to make changes in FM Translator K236BN, Cody, WY

Discussion

Applicant seeks to move the facility to a different tower at the same communications site with a corresponding change in coordinates and CORAMSL.

Waiver Request of Section 74.1204, and Showing of Compliance

The proposed FM translator is located within the protected 60 dBu F(50,50) contour of reserved allocation channel 233, Cody, WY (see Overlap Study, **Figure 1**). The predicted F(50,50) field strength of AL1497 at the proposed translator site is 68.6 dBu (free space equation). Using the Undesired to Desired method for calculating proposed interference, the interfering contour of the proposed translator with respect to AL1497 is 108.6 dBu (68.6 + 40)(free space contour method employed). This interfering signal would, in the worst case at the maximum radial, extend 82.7 meters from the transmitting antenna. A circle representing the actual interference contour has been plotted on a section of the 7.5 min USGS IRMA FLATS, WY (USGS) Topographical map (see **Figure 2**). In addition, the actual interference contour has been plotted on a recent aerial photo to illustrate the absence of any newer development in the area (see **Figure 3**). The site is located on a remote mountain top. All structures in the area house communications equipment only, and have no regular human occupancy. Since no population inhabits the interference area, the Applicant respectfully requests a waiver of the FM translator contour overlap requirements with respect to third adjacent channel allocation AL1497, Cody, WY

Relocate K236BN to different tower Western Inspirational Broadcasters, Inc. CH# 236D - 95.1 MHz, Pwr= 0.01 kW DA, HAAT= 568.5 M, COR= 2333.5 M Average Protected F(50-50)= 13.3 km Standard Directional											
REFERENCE 44 29 45.8 N. 109 09 11.5 W.								MDISPLAY DATES DATA 08-10-21 SEARCH 08-10-21			
CH	CALL	TYPE	ANT	AZI.	DIST	LAT.	Pwr(kw)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		←	FILE #	LNG.	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)	
236D Cody	K236BN!	LIC DVN WY		13.1 193.1	0.12 BLFT20140714AAA	44 29 49.80 109 09 10.20	0.010 567		---Reference---		
233C2 Cody	AL1497	RSV-A WY		72.5 252.8	27.67 Rminv-34	44 34 12.84 108 49 11.48	50.000 150	4.6 1683	42.7 7038482130	7.0	-15.3*
237C Jackson	KZJH	LIC CN WY		228.6 47.5	172.12 BLH19890714KA	43 27 39.70 110 45 11.70	100.000 322	113.7 2474	73.2 Jackson Hole	51.3 Radio, LLC	77.2
237C1 Jackson	KZJH	APP CN WY		228.6 47.5	172.08 0000152309	43 27 42.30 110 45 12.70	12.600 305	82.4 2460	52.8 Jackson Hole	82.3 Radio, LLC	98.1

237L1 KXDM-LP Worland	LIC	CN WY	117.5 112.90 298.3 BLL20140825ABZ	44 01 15.10 0.100 107 54 00.30 -3	90.5 1282 Divine Mercy Radio	84.4
238C0 KCHH Worden	LIC	CN MT	29.5 159.67 210.2 BLH20080807ABL	45 44 28.80 100.000 9.0 108 08 21.40 300	67.1 135.8 1392 Townsquare License, LLC	91.8
235C KZWY Sheridan	LIC	CN WY	84.3 161.95 265.7 BLH19990914AAM	44 37 19.80 75.000 53.2 107 06 59.20 368	29.0 93.4 2380 Lovcom, Inc.	95.8

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Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM  
In & Out distances between contours are shown at closest points. Reference Zone= West Zone, Co to 3<sup>rd</sup> adjacent.  
All separation margins (if shown) include rounding. Call signs with exclamation marks need not be protected.  
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)  
"\*"affixed to 'IN' or 'OUT' values = site inside restricted contour.

3<sup>rd</sup> adjacent waiver requested

**FIGURE 1**



**FIGURE 2**



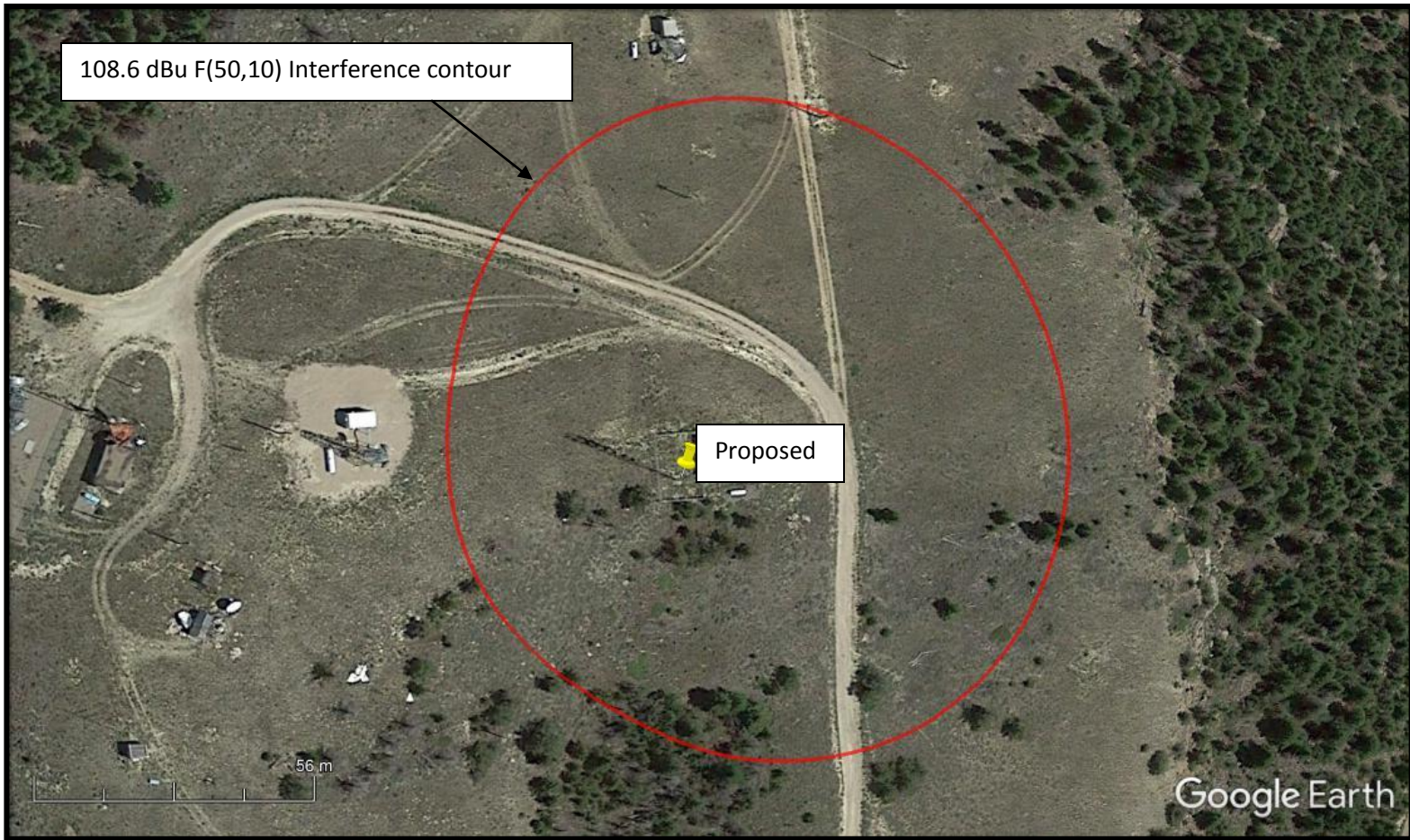


FIGURE 3

### Minor Modification Qualification

Virtually identical overlapping 60 dBu contours (see **FIGURE 4**).

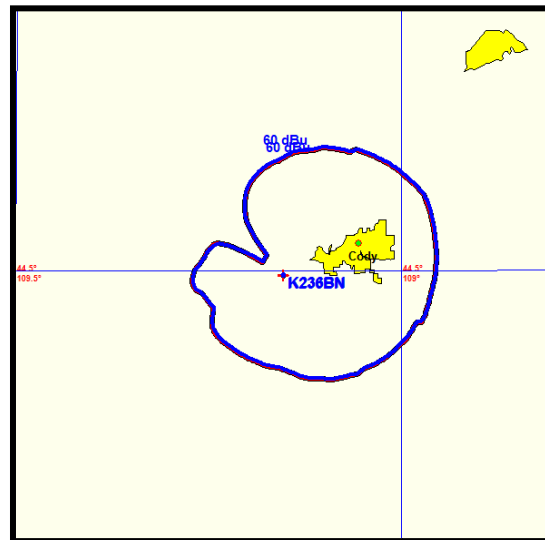


FIGURE 4

## **Environmental Compliance**

FM Translator K236BN, FID # 71807

There will be no new construction. The facility will be located on an existing registered tower.

Western Inspirational Broadcasters, Inc. (“WIBI”) certifies that FM Translator K236BN complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments.

WIBI used RFHAZ4, a commercial software package created by V-Soft Communications, to determine compliance for this site.

The facility employs a Kathrein/Scala FMV (vertical polarization) transmit antenna and is located at an existing communications site which is shared with other broadcast facilities. The field strength of the translator’s antenna varies with angle of depression from horizontal. Using the vertical elevation field data provided by the manufacturer for the calculations, the maximum contribution to the site is  $0.054 \mu\text{W}/\text{cm}^2$ , which is 0.03% of the worst-case uncontrolled (public) exposure limit of  $200\mu\text{W}/\text{cm}^2$ .

This value falls below the 5% “threshold of responsibility” specified in 47 C.F.R. 1.1307(b) and 1.1307(b) (3) and is therefore “categorically excluded” from providing an Environmental Assessment.