

COMPREHENSIVE TECHNICAL EXHIBIT

Western Inspirational Broadcasters, Inc.
Application to make changes in FM Translator K257DP, Pinedale, WY; FID # 71838

Discussion

Applicant seeks a minor modification (change of frequency to Channel 254) due to the grant of a Construction Permit for a nearby new co-channel full service FM, NEW, Marbleton, WY; FID # 762207 (LMS 0000159186), which will displace K257DP.

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 a NEW, Marbleton, WY facility (see Overlap Study, **Figure 1**). The predicted F(50,50) field strength of NEW Facility # 762207 at the proposed translator site is 70.85 dBu (free space equation). Using the Undesired to Desired method for calculating proposed interference, the interfering contour of the proposed translator with respect to NEW is 110.85 dBu (70..85 + 40)(free space contour method employed). This interfering signal would, in the worst case at the maximum radial, extend 238.11 meters from the transmitting antenna. A circle representing the interference contour has been plotted on a section of the 7.5 min USGS MT. AIRY, 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 NEW, Marbleton, WY, FID # 762207.

K257DP Minor Modification											
Western Inspirational Broadca											
REFERENCE		CH# 254D - 98.7 MHz, Pwr= 0.14 kw DA, HAAT= 135.6 M, COR= 2357 M								DISPLAY DATES	
42 50 38.7 N.		Average Protected F(50-50)= 12.9 km								DATA 09-15-22	
109 55 31.5 W.		Standard Directional								SEARCH 09-15-22	
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)	
257C1 NEW		CP	NCN	215.7	57.44	42 25 26.00	100.000	12.2	83.8	33.5	-26.8*
Marbleton			WY	35.5	0000159186	110 20 03.00	280	2668	Wind River Broadcasting, I		
257C1 AU9810924		VAC		209.4	66.22	42 19 27.78	100.000	11.6	80.2	42.9	-14.4*
Marbleton			WY	29.1	RM11365	110 19 14.59	299	2637	From CDBS		
257D K257DP!		LIC	DVN	0.0	0.00	42 50 38.70	0.140		---Reference---		
Pinedale			WY	100.6	BLFT19950808TB	109 55 31.50	137	2357	Western Inspirational Broa		

254A KRSV-FM Afton	LIC CN WY	270.8 85.98 90.1 BMLH19941114KC	42 51 01.70 3.000 110 58 48.70 -88	53.3 13.2 19.5 2008 Svi Media, LLC	30.8
256D K256CI Bondurant	LIC CN WY	316.7 41.82 136.5 BLFT20161129AHD	43 07 02.70 0.100 110 16 43.60 -75	0.7 5.6 29.0 2260 University of Wyoming	35.4
254C3 KAWR Reliance	LIC NCN WY	162.1 157.22 342.4 0000190541	41 29 50.00 1.300 109 20 38.00 328	80.8 27.7 67.1 2346 Educational Media Foundati	104.6
256C KWWY Lost Cabin	LIC CN WY	66.5 170.01 247.8 BLH20010730AAA	43 26 17.80 51.000 107 59 39.30 578	12.2 92.4 145.5 2499 Edwards Communications Lc	76.3
256C KWWY Lost Cabin	STA CN WY	66.5 170.01 247.8 0000191099	43 26 17.80 51.000 107 59 39.30 578	12.2 92.4 145.5 2499 Edwards Communications Lc	76.3
257D K257FT Teton Village	LIC CN WY	319.6 112.23 139.0 BLFT20170728AGO	43 36 32.70 0.100 110 49 45.70 217	0.7 26.3 99.5 2564 Ted W. Austin, Jr.	84.9
201C2 KCWC-FM Riverton	LIC CN WY	105.9 103.39 286.7 BLED19850305KW	42 34 58.80 3.000 108 42 38.40 442	0.0 0.0 14.5R 2776 Central Wyoming College	88.9M
254C KBEE Salt Lake City	LIC CN UT	217.5 310.09 36.0 BMLH20100723AVI	40 36 29.80 40.000 112 09 36.70 894	205.6 97.2 92.6 2603 Radio License Holding Cbc,	173.9

Terrain database is NED 03 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 3rd 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.
« = Station meets FCC minimum distance spacing for its class.

3rd adjacent waiver requested

FIGURE 1

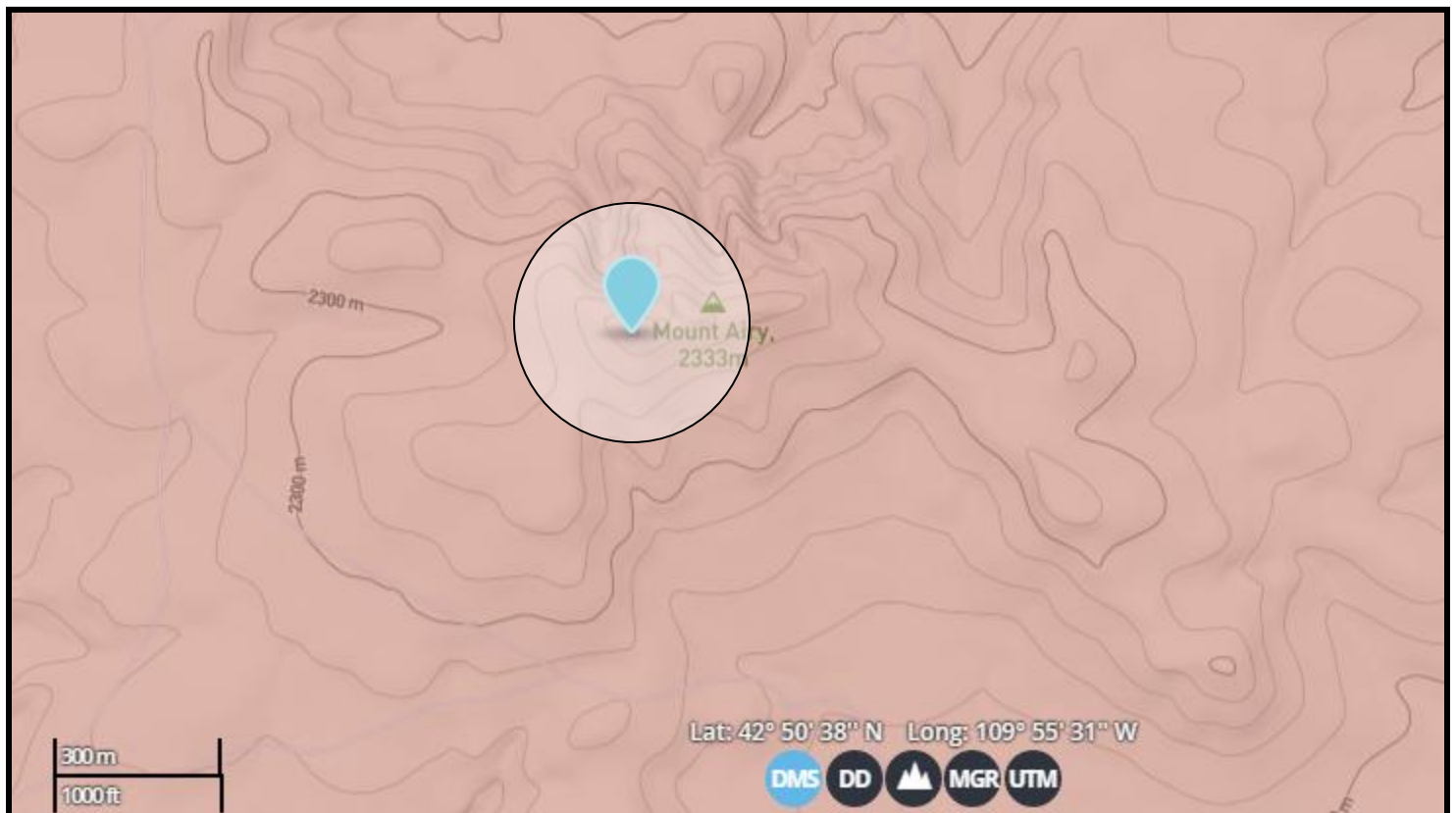


FIGURE 2

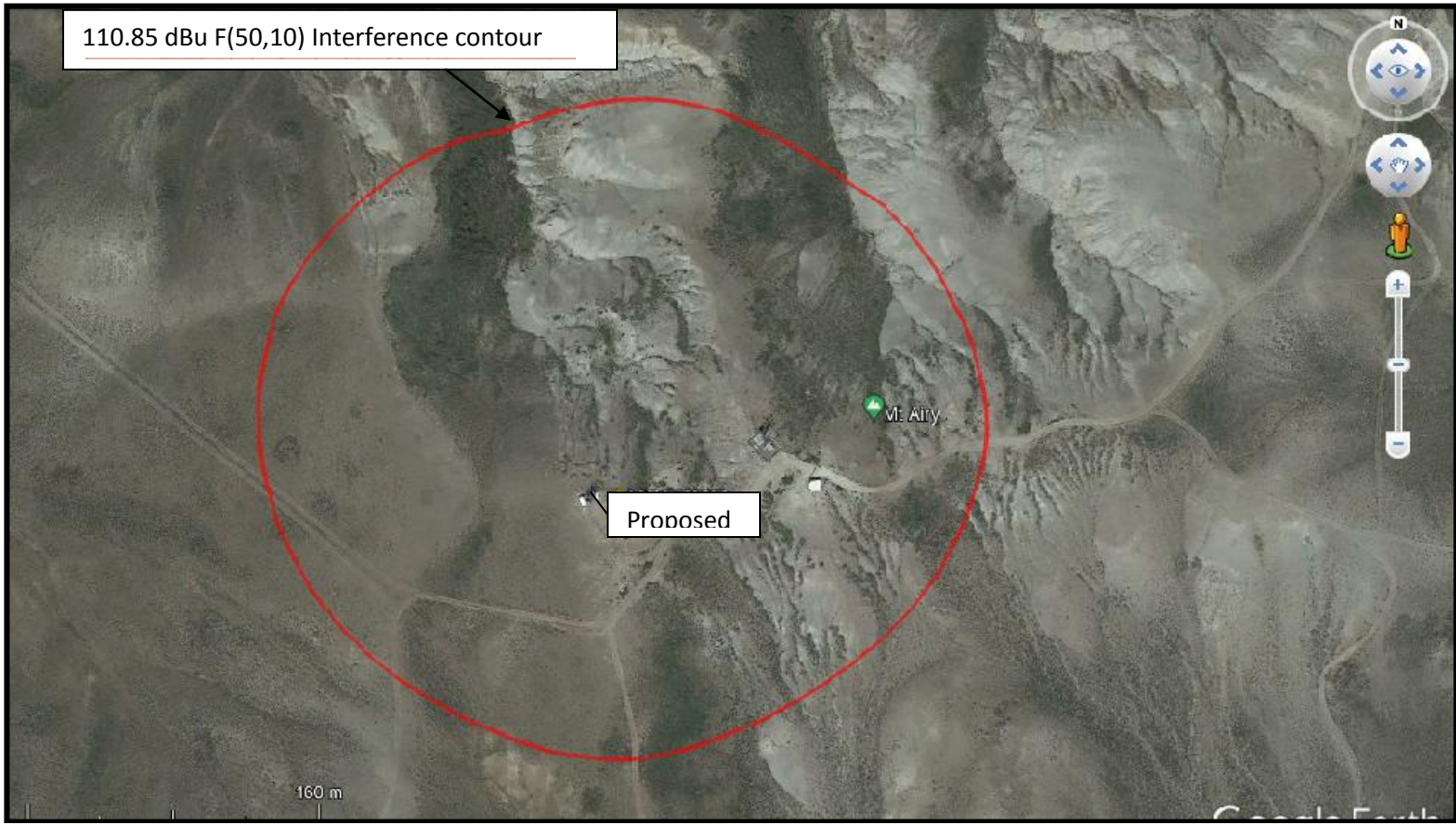


FIGURE 3

Minor Modification Qualification

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

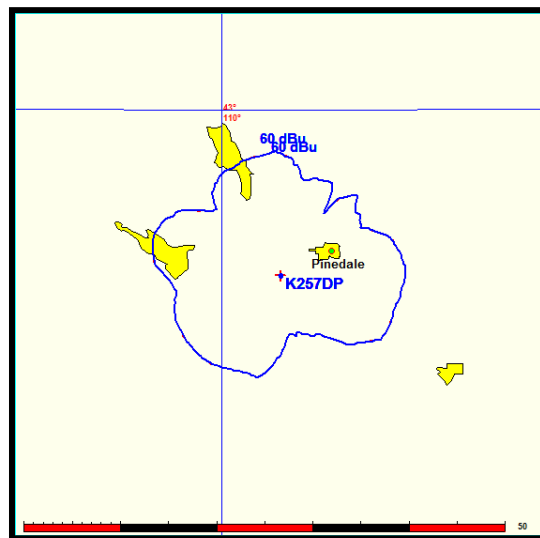


FIGURE 4

Environmental Compliance

FM Translator K257DP, FID # 71838

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

Western Inspirational Broadcasters, Inc. ("WIBI") certifies that FM Translator K257DP complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments. WIBI used the V-Soft RFHAZ4 software program, to determine compliance for this site. The facility employs a 2 bay Scala FMV (1 wavelength spacing) Type 1 transmit antenna and is located at an existing communications site with other broadcast facilities nearby. The maximum K257DP contribution to the site is 13.48 $\mu\text{W}/\text{cm}^2$, which occurs 5.0 meters from the base of the tower and is 6.74 % of the worst-case uncontrolled (public) exposure limit of 200 $\mu\text{W}/\text{cm}^2$. Combined with relevant RF generated by nearby FM & TV broadcast facilities, this site results in a total of 46.229 $\mu\text{W}/\text{cm}^2$ (see table below) combined RF energy at 5.0 meters from the base of the supporting tower, or, 23.11 % of the "public" exposure limit. Signs warning of the presence of RF electromagnetic fields are posted.

CHANNEL	CALLS	H POWER (watts)	V POWER (watts)	HAG (meters)	EPA Antenna**	RFR* (V-Soft RFHAZ4)	Proximity (meters)	Intersect Distance (m)
257	K257DP	0	140	5	Vert. Dipole 2 bay	13.48	n/a	n/a
282	KFZE	4000	4000	13	Shively 6813-4 Type 1	9.08	22	17
215	KUWX	450	450	12	Shively 6812-2 Type 1	2.91	100	95
210	KWCN	75	75	6	Nicom BKG-77 Type 2	0.57	100	95
266	KPIN	4000	4000	11.4	Shively 6812B 4 bay w/0.9 spacing Type 1	19.2	100	95
39	KTRY-LP	250	0	12	Scala SL-8	0.029	100	95
45	KWVF-LP	5170	0	15	Scala SL-8	0.96	100	95
TOTAL						46.229		

*microwatts/cm² at intersection with K257DP highest level

** one (1) wavelength spacing, unless noted)

The permittee/licensee in coordination with other users of the site will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.