

# Minor Modification of Permit BMPFT-20190520AAI Facility ID No. 200599 K268DL

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This exhibit is for minor modification to the permit for K268DL. It is for a change in transmitter location only.

## **Antenna Location**

The proposed non-directional antenna is to be mounted on the existing unregistered support tower at 21.3 meters above ground. As an unregistered structure is being used a recent land survey providing the tower location and elevations is memorialized in this exhibit as **Figure 0**. Below as **Figure 1** is an overlap and spacing study from which it can be determined that this proposal is within the licensed and permitted protected contour of **second** adjacent channel stations KEYF-FM, and KTSL.

## **73.1204 Compliance**

We will demonstrate that a lack of population and/or other factors allow this proposal to be compliant with 74.1204. The process commonly called "Living Way", allows for the use of D/U Analysis, also known as "signal strength ratio methodology" to be utilized to demonstrate compliance. In this instant case the facility to be protected is on a second or third adjacent channel and is to be afforded protection from signals 40 dB stronger than the protected facility presents near the proposed translator antenna location.

**Concerning KTSL;** In **Figure 2** a map showing the predicted 68.0 dBu signal contour of the protected KTSL facility at the proposed translator antenna location is given. This proposal can only cause predicted interference to the protected facility by having a signal exceeding 108.0 dBu (68.0 + 40) in a habitable/populated area. Utilizing the line of sight equation it has been determined that a 108.0 dBu signal developed by 250 watts by an antenna mounted 21.3 meters above ground, will not reach any habitable areas. With examination of the image in **Figure 3** it can be determined that no habitable space extends into the confines of this contour which is overlaid on the image to scale.

**Concerning KEYF-FM;** In **Figure 2** a map showing the predicted 140.0 dBu signal contour of the protected KEYF-FM facility at the proposed translator antenna location is given. This is a stronger signal than KTSL, thus by protecting KTSL, KEYF-FM is inherently protected.

Thus the provisions of the rules section concerning prohibited overlap will not apply as it has been demonstrated that no actual interference will occur due to a lack of population and other factors as applied in this instant proposal.

### **Fill-in and Minor Change Status**

This proposal is to serve as a fill-in translator for station KZFS, Facility ID 53149, Spokane, WA. The map of **Figure 5** demonstrates that the proposed 60 dBu contour is contained within that of the 2 mV/m of that facility. Also demonstrated is the required service contour overlap.

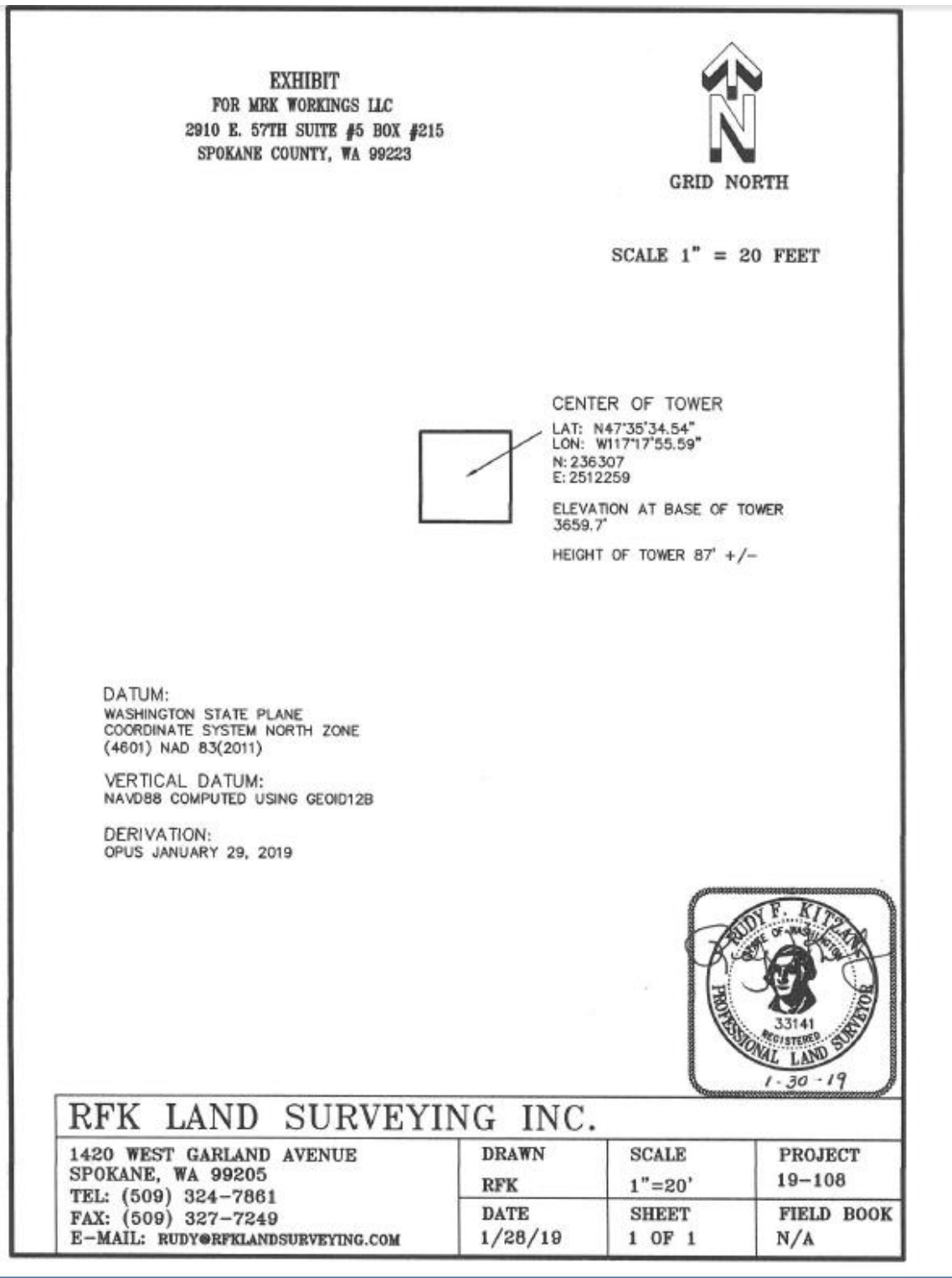
### **RF Fields Statement**

The proposed facilities were evaluated in terms of potential radio frequency radiation exposure at ground level in accordance with OET Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radio frequency Radiation."

The proposed antenna system is a Bext TFC2K 1-Bay mounted 21.3 meters above ground. For purposes of this analysis the FM Model web-tool has been set to calculate values for an "Opposed V Dipole, EPA type 2" of antenna element array, operated with an effective radiated power of 0.250 Kilowatts in vertical. At 2 meters above the surface, at 19.7 meters from the base of the tower, this proposal will contribute worst case, 12.3 microwatts per square centimeter, or 1.23 percent of the allowable ANSI limit for controlled exposure, and 6.15 percent of the allowable limit for uncontrolled exposure. It is therefore believed that this proposal is in compliance with OET Bulletin Number 65 as required by the Federal Communications Commission.

Further, the applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The site itself is restricted from public access. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

**Figure 0.**

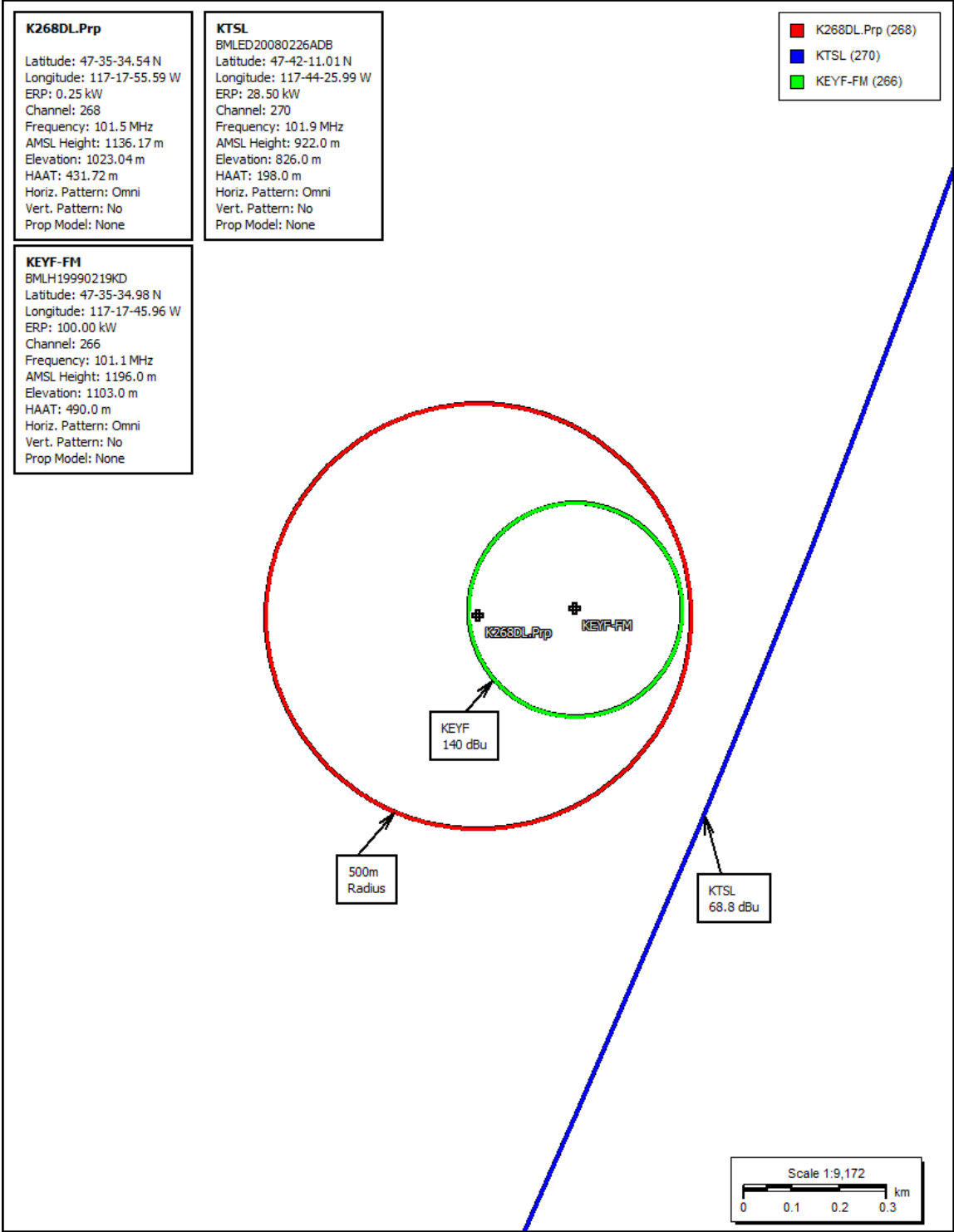


**Figure 1. Overlap and Spacing Study**

To MRK Workings LLC Tower 70 ft AGL Capstar TX, LLC CH# 268D - 101.5 MHz, Pwr= 0.25 kW, HAAT= 423.6 M, COR= 1137 M Average Protected F(50-50)= 26.53 km Omni-directional										
REFERENCE									DISPLAY DATES	
47 34 34.54 N.									DATA 10-17-19	
117 17 55.59 W.									SEARCH 10-21-19	
CH	CALL	TYPE	ANT	AZI	DIST	LAT	PWR(kw)	INT(km)	PRO(km)	*IN*
CITY		STATE		<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)
268D	K268DL	CP	D	21.7	0.31	47 34 44.00	0.250		---	Reference---
Spokane		WA		201.7	BMPFT20190520AAI	117 17 50.00		1303	Capstar TX, LLC	
266C	KEYF-FM	LIC		3.8	1.85	47 35 34.60	100.000	12.4	85.5	-37.8*
Cheney		WA		183.8	BMLH19990219KD	117 17 49.70	490	1196	Smg-Spokane, LLC	-84.7*
268C1	KATW	CP		173.1	125.28	46 27 26.60	75.000	137.6	45.9	-38.4*
Lewiston		ID		353.2	BPH20180129AFK	117 06 06.60	340	930	Pacific Empire Radio Corpo	1.7
268C1	KATW	LIC		170.2	125.87	46 27 37.50	100.000	130.7	31.0	-30.8*
Lewiston		ID		350.4	BLH19851010KC	117 01 03.50	258	850	Pacific Empire Radio Corpo	17.9
270C2	KTSL	LIC		293.2	36.03	47 42 10.60	28.500	6.0	53.2	2.0
Medical Lake		WA		112.8	BMLE20080226ADB	117 44 29.80	198	922	Educational Media Foundati	-18.3*
269D	K269DU	LIC	D	28.0	95.28	48 19 53.70	0.050	2.3	1.1	64.0
Sandpoint		ID		208.4	BLFT19960111UI	116 41 38.70	875	1897	Spokane Public Radio	39.1

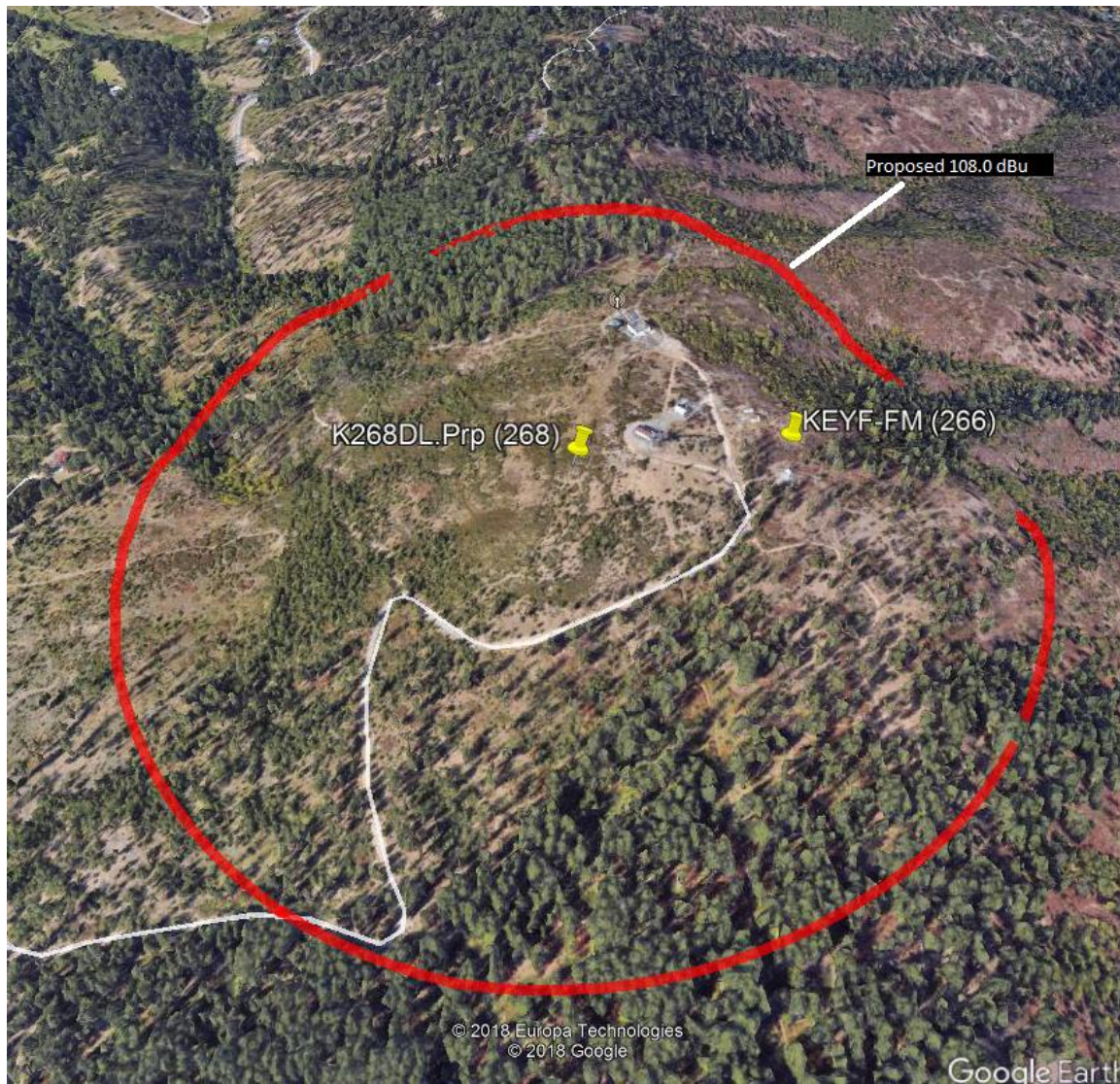
Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM  
 In & Out distances between contours are shown at closest points. Reference zone= West Zone, Co to 3rd adjacent.  
 All separation margins (if shown) include rounding.  
 Ant Column: (D= DA 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.

Figure 2. Contour Map





**Figure 3. Image of Proposed Support Tower with 108.0 dBu Contour**



**Map Header**

Minor Change fill in Oct 2019.rs2

Wednesday, October 23, 2019

**Map Header**

50  
40  
30  
20  
10  
0  
10  
20  
30  
40  
50

km

50 40 30 20 10 0 10 20 30 40 50

**Map Footer**

State Borders Lat/Lon Grid

Map Scale: 1:711839 1 cm = 7.12 km V/H Size: 112.63 x 116.00 km