

**New Translator**  
**Whitefish, MT**  
Proposed New Translator Facility

**Application Overview:**

The Applicant proposes a Long Form 349 Application to BNPFT-20030314BUL using the following parameters:

**Tech Box:**

Channel:	226
Antenna Coordinates:	N48-30-22, W114-20-49 (NAD 27)
ASRN:	N/A
Tower Site Base AMSL:	2078 m
Overall Tower Height AGL:	36 m
COR AGL:	17 m
ERP:	0.25 kW
Directional Antenna:	Yes - see Exhibit 4

**LPFM NOTE:** This transmitter site is NOT located within 39 kilometers of any Appendix A Market grid and/or within any Top-50 Spectrum Limited Market. Therefore, an LPFM Preclusion Study is not required.

**Primary Station and Translator Protected Contour Relationship:**

Exhibit 1 demonstrates that the proposed fill-in translator facility's protected contour is completely encompassed by the protected contour of the primary station being rebroadcast.

**Interference Study (Fully Spaced):**

Exhibit 2 is a contour overlap study demonstrating that the proposed antenna site provides requisite contour protection towards all applications, authorizations, and permits pursuant to Section 74.1204.

**Antenna Located BELOW directional antenna:**

The applicant notes that this facility shall be mounted on the same tower as non-directional stations KSPL(FM) and K258AP Kalispell. It will also be located beneath the directional facilities of KUKL(FM) Kalispell, MT. As such, it will have no impact on the azimuth pattern of KUKL(FM).

**Downward Radiation Study (FM Model):**

The proposed FM Facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OET Bulletin No. 65, Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields (OET Bulletin 65, Second Edition 97-01, August, 1997). The Commission's FM Model Power Density Prediction program was employed to determine the Field. Using the Phelps-Dodge "Worst Case" Ring Stub antenna with 1 sections and 1 wavelength spacing, and the AGL height and ERP proposed in this, the highest predicted power

density 2 meters above ground is less than 22.3% of the Uncontrolled Standard with a Power Density of 44.6 microwatts per square centimeter 4 meters from the base of the tower.

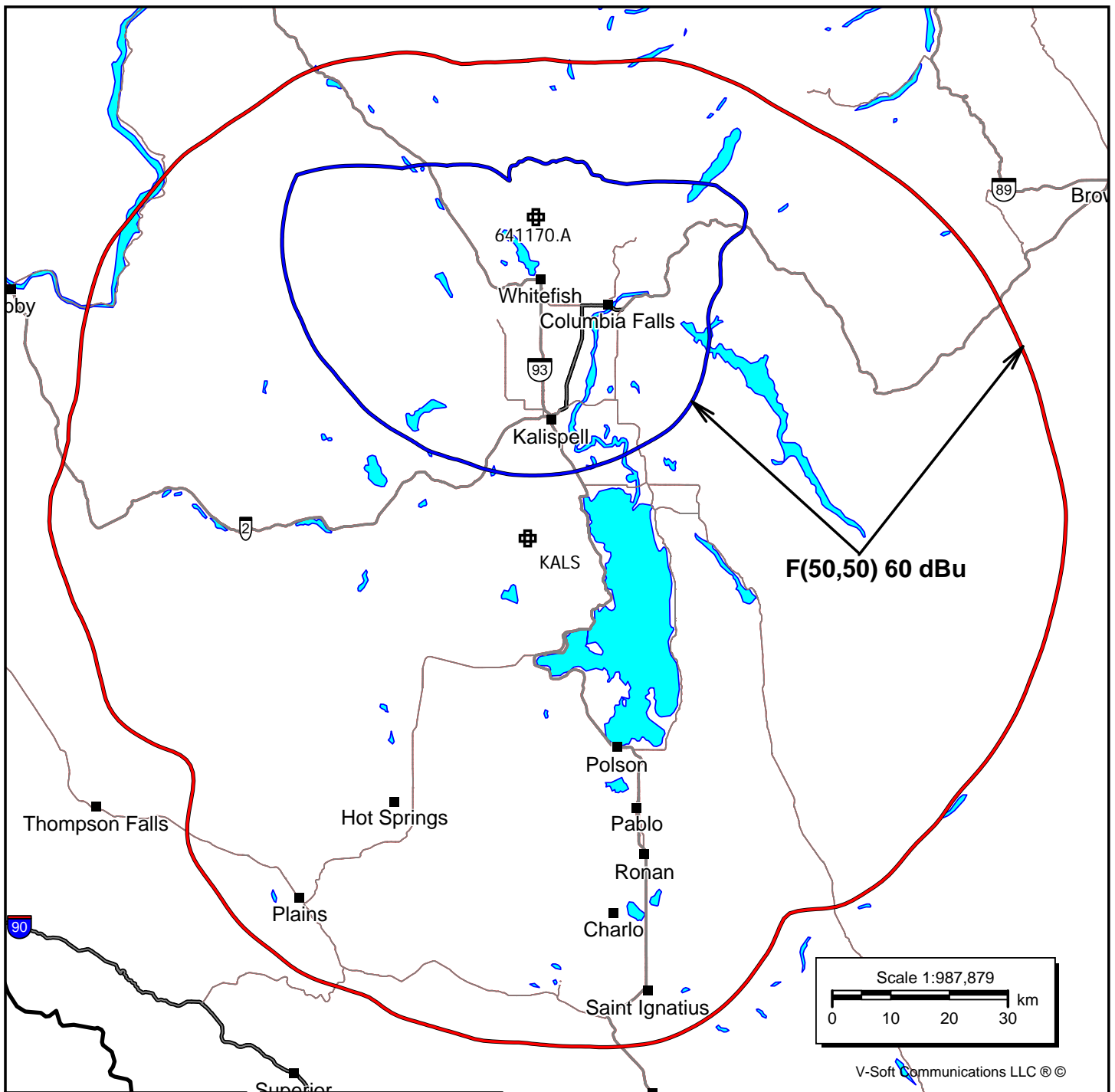
Even though the site will fully comply with the Uncontrolled Site Standards, access to the transmitting site will be restricted and appropriately marked with warning signs. When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shut down of power if necessary, shall be taken to ensure that the human exposure to radiofrequency radiation will not exceed the FCC guidelines.

**Existing Tower:**

The proposed facility is exempt from environmental processing because the facility is not located at a location specified in Section 1.1307(a)(1)-(8) of the Commission's Rules and since the tower in question already exists.

# **Exhibit 1**

**Primary Station Protected Contour  
vs.  
Proposed Translator Protected Contour**

**641170.A**

BNPFT20030314BUL  
Channel: 226D  
Frequency: 93.1 MHz  
Latitude: 48-30-22 N  
Longitude: 114-20-49 W  
COR AGL Height: 17.0 m  
COR AMSL Height: 2095.0 m  
Base Elevation: 2078.0 m  
COR HAAT: 782.87 m  
ERP: 0.25 kW  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None

**KALS**

BMLH20040607AAC  
Channel: 246C  
Frequency: 97.1 MHz  
Latitude: 48-00-48 N  
Longitude: 114-21-55 W  
COR AGL Height: 27.0 m  
COR AMSL Height: 2065.0 m  
Base Elevation: 2038.0 m  
COR HAAT: 758.0 m  
ERP: 26.50 kW  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

## **Exhibit 2**

### **Section 74.1204 Interference Tabulations**

641170 on Channel 226 Whitespace, MT Section 74.1204 Contour Overlap Tabulations CH# 226D - 93.1 MHz, Pwr= 0.25 kW DA, HAAT= 782.9 M, COR= 2095 M Average Protected F(50-50)= 37.56 km Standard Directional										
REFERENCE									DISPLAY DATES	
48 30 22.0 N.									DATA 07-09-13	
114 20 49.0 W.									SEARCH 07-21-13	
CH CITY	CALL	TYPE ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
226D Whitfish	641170	APP_V_ MT	158.7 338.8	8.42 BNPFT20030314BUL	48 26 08.0 114 18 20.0	0.020 -116	12.0 1060	3.7 Kali spell Christian Radio	-46.7*	-105.6
227C Missoula	KGGL	LIC_CN MT	170.7 350.9	165.99 BLH19950426KA	47 01 57.0 113 59 31.0	43.000 777	139.4 2338	95.9 Ccr-missoula Iv, Lic	-17.2	4.9
224D Kali spell	K224DV	LIC_C_ MT	154.8 335.0	53.75 BLFT20111213ACB	48 04 07.0 114 02 20.0	0.250	1.1 1162	20.7 Educational Media Foundati	9.8	23.4
280C1 Kali spell	KZMN«	LIC_EN MT	172.9 352.9	46.16 BLH19910830KC	48 05 39.0 114 16 11.0	100.000 174	22.1 1257	14.7 Kofi, Inc.	21.5R	24.7M
227C1 Taber	R29294«	ADD_ AB	47.2 228.7	196.31	49 41 09.0 112 20 48.0	100.000 299	101.0 1176	86.0	167.5R	28.8M
228A Eureka	KZXT	LIC_C_ MT	311.7 131.2	66.27 BLH20091204AAI	48 54 00.7 115 01 20.7	2.000 -210	1.6 943	12.0 Anderson Radio Broadcastin	51.5	52.2
226A1 Coleman	R12873	VAC_ AB	355.2 175.1	127.05	49 38 41.0 114 29 40.0	0.250 100	53.8 1824	18.0	63.3	57.4

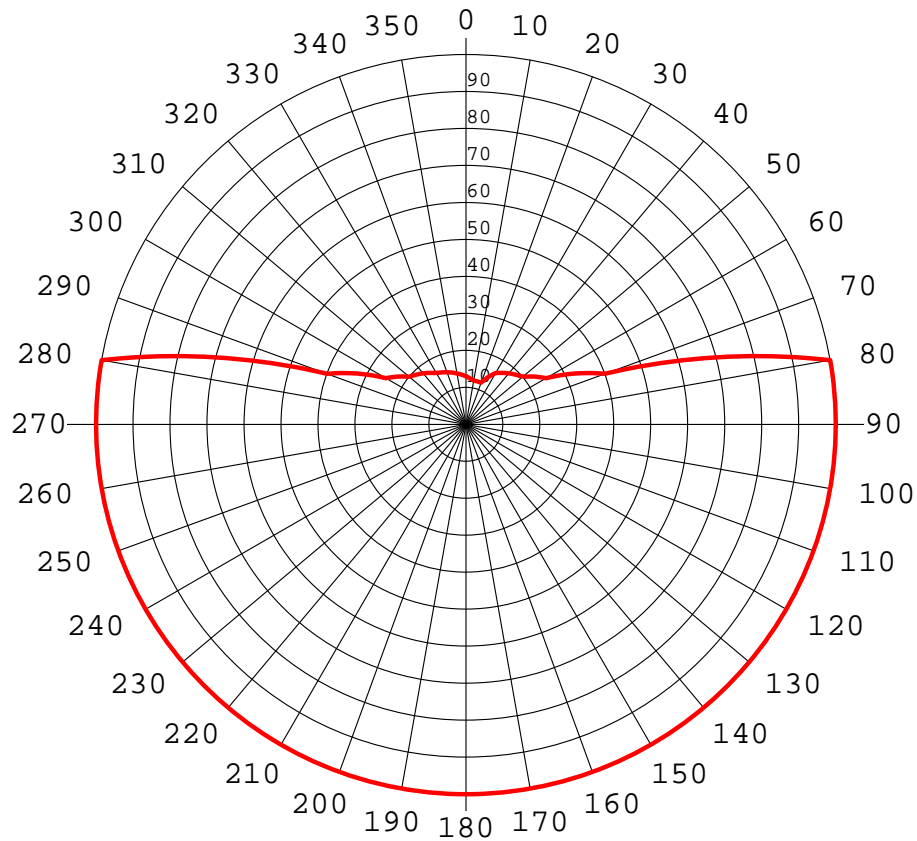
Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM  
 Contour distances are on direct line to and from reference station. Reference zone=, Co to 3rd adjacent.  
 All separation margins (if shown) include rounding  
 Ant Column: (D= DA Standard, 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 protected contour.  
 « = Station meets FCC minimum distance spacing for its class.

## **Exhibit 4**

### **Proposed Azimuth Pattern**



# New Translator Channel 226 Whitefish, MT



Azi	Rel	dBk	kW	dB	Azi	Rel	dBk	kW	dB
0	0.130	-23.74	0.004	-17.72	180	1.000	-6.02	0.250	0.00
10	0.120	-24.44	0.004	-18.42	190	1.000	-6.02	0.250	0.00
20	0.120	-24.44	0.004	-18.42	200	1.000	-6.02	0.250	0.00
30	0.160	-21.94	0.006	-15.92	210	1.000	-6.02	0.250	0.00
40	0.180	-20.92	0.008	-14.89	220	1.000	-6.02	0.250	0.00
50	0.200	-20.00	0.010	-13.98	230	1.000	-6.02	0.250	0.00
60	0.250	-18.06	0.016	-12.04	240	1.000	-6.02	0.250	0.00
70	0.400	-13.98	0.040	-7.96	250	1.000	-6.02	0.250	0.00
80	1.000	-6.02	0.250	0.00	260	1.000	-6.02	0.250	0.00
90	1.000	-6.02	0.250	0.00	270	1.000	-6.02	0.250	0.00
100	1.000	-6.02	0.250	0.00	280	1.000	-6.02	0.250	0.00
110	1.000	-6.02	0.250	0.00	290	0.400	-13.98	0.040	-7.96
120	1.000	-6.02	0.250	0.00	300	0.250	-18.06	0.016	-12.04
130	1.000	-6.02	0.250	0.00	310	0.200	-20.00	0.010	-13.98
140	1.000	-6.02	0.250	0.00	320	0.180	-20.92	0.008	-14.89
150	1.000	-6.02	0.250	0.00	330	0.160	-21.94	0.006	-15.92
160	1.000	-6.02	0.250	0.00	340	0.150	-22.50	0.006	-16.48
170	1.000	-6.02	0.250	0.00	350	0.140	-23.10	0.005	-17.08

Rotation Angle = 0