K282AV
Cascade, MT

Proposed Minor Modification
of Licensed Facility

Application Overview:

The Applicant proposes to modify BLFT-20070425AGN using the following parameters:

Tech Box:

Channel:	283
Antenna Coordinates:	N47-11-17, W111-15-00 (NAD 27)
ASRN:	N/A
Tower Site Base AMSL:	1682 m
Overall Tower Height AGL:	5 m
COR AGL:	5 m
ERP:	0.25 kW
Directional Antenna:	Yes - See Exhibit 4

Primary Station and Translator Protected Contour Relationship:

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

Interference Study:

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 with the exception of the licensed facilities of second adjacent KIKF(FM) Cascade, MT (see BLH-20011210ABW.

Section 74.1204(a) states that "an application for an FM translator station will not be accepted for filing if the proposed operation would involve overlap of predicted field strength contours with any other station, including commercial and noncommercial educational FM stations, FM translators and Class D (secondary) noncommercial educational FM stations." However, Section 74.1204(d) states, "the provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or other such factors as may be applicable."

Using the undesired-to-desired ratio method regarding interference to a second or third adjacent frequency, interference is predicted to occur where the translator's undesired signal exceeds the protection station's desired signal by more than 40 dB. The free space formula was used to determine the signal strength, in dBu, of each facility at the proposed translator's transmitter site. The F(50,10) 136.8 dBu interfering contour for the proposed translator was studied to see if it complies with the lack of population exceptions stipulated in Section 74.1204(d) since the KIKF(FM) signal at the proposed translator site is calculated to be 96.8 dBu..

The calculated F(50,10) 136.8 dBu interference contour travels 0.02 kilometers (20 meters) from the aperture of the antenna. Exhibit 2C includes a satellite view of the proposed translator site. The nearest structure or public road (other than the site access road to the tower) is located more than 1.77 kilometers from the base of the tower – far outside the very small interference contour predicted to be created by the translator. Therefore, due to the absence of "potential listeners" within the interference contour, no interference is expected to occur towards KIKF(FM).

No Co-Located Emitters:

No other authorized or proposed emitters are located at the proposed antenna site.

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 Shively 6513/6510 Vertical Dipole antenna with 1 sections and 1 wavelength spacing, and the AGL height and ERP proposed in this application, the highest predicted power density 2 meters above ground is less than 91.1% of the Uncontrolled Standard with a Power Density of 182.2 microwatts per square centimeter 3.6 meters from the base of the tower.

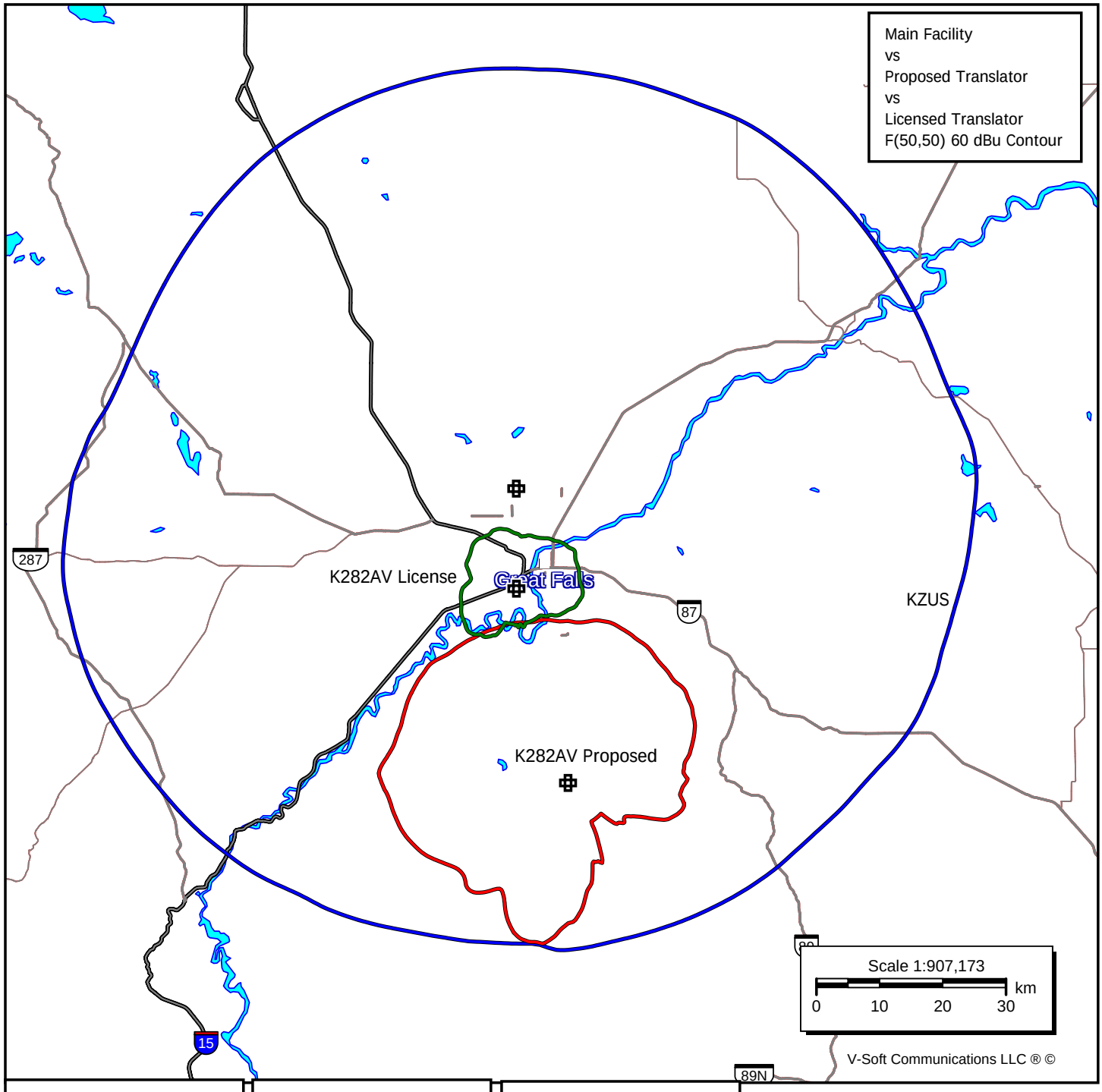
Even though the site will fully comply with the Uncontrolled Site Standards, access to the transmitting site will be restricted and appropriately marked with warning signs. When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shut down of power if necessary,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

Existing Structure:

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 mounting structure already exists.

Exhibit 1

Primary Station Protected Contour
vs.
Proposed Translator Protected Contour



K282AV License
BLFT20070425AGN
Channel: 282D
Frequency: 104.3 MHz
Latitude: 47-27-52 N
Longitude: 111-21-29 W
COR AGL Height: 15.0 m
COR AMSL Height: 1140.0 m
Base Elevation: 1125.0 m
COR HAAT: 0.0 m
ERP: 0.099 kW
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

K282AV Proposed

Channel: 283D
Frequency: 104.5 MHz
Latitude: 47-11-17 N
Longitude: 111-15-00 W
COR AGL Height: 5.0 m
COR AMSL Height: 1687.0 m
Base Elevation: 1682.0 m
COR HAAT: 312.37 m
ERP: 0.25 kW
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

KZUS
BMLH20090730AAS
Channel: 269C1
Frequency: 101.7 MHz
Latitude: 47-36-24 N
Longitude: 111-21-31 W
COR AGL Height: 198.0 m
COR AMSL Height: 1362.0 m
Base Elevation: 1164.0 m
COR HAAT: 273.0 m
ERP: 100.00 kW
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

Exhibit 2

Section 74.1204
Interference Tabulations

K282AV on Channel 283 Cascade, MT
Section 74.1204 Overlap Study

REFERENCE CH# 283D - 104.5 MHz, Pwr= 0.25 kW DA, HAAT= 312.4 M, COR= 1687 M DISPLAY DATES
47 11 17.0 N. Average Protected F(50-50)= 23.01 km DATA 11-02-10
111 15 00.0 W. Standard Directional SEARCH 11-11-10

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)	
282D	K282AV	LIC	_C_	345.2	31.8	47 27 52.0	0.099	8.1	5.7	-2.5	-14.4
Great Falls		MT		165.1	BLFT20070425AGN	111 21 29.0		1140	Horizon Christian Fellowsh		
285C	KIKF	LIC	_CX	99.9	18.4	47 09 34.0	94.000	14.5	95.1	-14.8*<	-77.8*
Cascade		MT		280.1	BLH20011210ABW	111 00 39.0	621	2179	Fisher Radio Regional Grou		
229D	KTZZ-FM1	LIC	DE_	356.6	38.7	47 32 09.0	20.000	10.6	10.6	11.5R	27.2M
Black Eagle		MT		176.6	BLFTB20020619AAA	111 16 49.0	57	1117	Jeannine M. Mason		
280C3	KUUS	LIC	_C_	350.1	47.3	47 36 24.0	3.500	3.4	41.7	17.8	4.5
Vaughn		MT		170.0	BMLH20090730AAT	111 21 31.0	273	1362	The Montana Radio Company,		
283C0	KKVU	RSV-A	___	259.2	211.5	46 48 06.0	100.000	176.9	75.4	6.9	53.0
Stevensville		MT		77.3		113 58 22.0	450	1729	Spanish Peaks Broadcasting		
283C0	KKVU	LIC	_C_	259.2	211.5	46 48 06.0	15.000	154.6	68.2	29.1	60.2
Stevensville		MT		77.3	BLH20050718AFZ	113 58 22.0	635	1914	Spanish Peaks Broadcasting		
281C3	KHKR-FM	LIC	_CN	231.9	75.0	46 46 11.0	5.000	3.0	32.0	49.9	41.9
East Helena		MT		51.3	BLH19951201KD	112 01 25.0	199	1503	Ccr-helena Iv, Llc		

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.
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.

Exhibit 2C

F(50,10) 100 dBu Contour Depictions:
F(50,10) 100 dBu Contour Map
Satellite Map


Proposed F(50,10)
136.8 dBu Contour
(20 meter radius)
Image © 2010 DigitalGlobe
© 2010 Google
68 m
©2009 Google
Imagery Date: Oct 3, 2003
47°11'16.82" N 111°15'02.89" W elev 1682 m
Eye alt 1.92 km

Exhibit 4

Antenna Azimuth Pattern

K282AV Proposed Antenna Azimuth Pattern

Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	1.000
10.0	1.000
20.0	1.000
30.0	1.000
40.0	1.000
50.0	1.000
60.0	1.000
70.0	1.000
80.0	1.000
90.0	1.000
100.0	1.000
110.0	1.000
120.0	1.000
130.0	1.000
140.0	1.000
150.0	1.000
160.0	1.000
170.0	1.000
180.0	1.000
190.0	0.900
200.0	1.000
210.0	1.000
220.0	1.000
230.0	1.000
240.0	1.000
250.0	1.000
260.0	1.000
270.0	1.000
280.0	1.000
290.0	1.000
300.0	1.000
310.0	1.000
320.0	1.000
330.0	1.000
340.0	1.000
350.0	1.000