

KBMG-FM1

Bountiful, UT

Proposed Minor Modification
of Licensed Booster Facility

Application Overview:

The Applicant proposes to modify BLFTB-20050316ABF using the following parameters:

Tech Box:

Channel:	292
Antenna Coordinates:	N40-50-05, W111-52-03 (NAD 27)
ASRN:	N/A
Tower Site Base AMSL:	1809 m
Overall Tower Height AGL:	22 m
COR AGL:	19 m
ERP:	1.2 kW
Directional Antenna:	Yes - see Exhibit 4

Primary Station and Booster Protected Contour Relationship:

Exhibit 1 demonstrates that the proposed booster 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 that examines the instant facility and its relationship with all nearby applications, authorizations, and permits pursuant to Section 74.1204. The study reveals that the proposed facility will violate Section 74.1204(i) towards KAAZ-FM and KAAZ-

FM1 operating on first adjacent channel 293. However, as mentioned above, the instantly proposed channel change is necessary to implement MB Docket 05-243, which also requires a channel change for KAAZ-FM and KAAZ-FM1 from 293 to 294. The KAAZ-FM changes must be implemented BEFORE the instantly proposed modification can be implemented in order to not cause first-adjacent interference. As such, the Applicant requests a special operating condition on the requested construction permit requiring the KAAZ-FM and KAAZ-FM1 changes occur prior to the instantly proposed facility commencing operations.

Proposed Booster to Combine into a Shared Antenna:

The signal of the proposed booster is to be combined into an antenna currently authorized for use by the following station(s):

- KZNS-FM5 Bountiful, UT (see BLFTB-20050906ABB)
- KYMV-FM3 Bountiful, UT (see BLFTB-20060907AAY)
- KEGA-FM6 Bountiful, UT (see BLFTB-20031103ABN)
- KDUT-FM1 Bountiful, UT (see BLFTB-20031103ACC)
- KSQN-FM9 Bountiful, UT (see BLFTB-20041105AFB)
- KNIV-FM4 Bountiful, UT (see BLFTB-20090414ABS)
- KEGH-FM2 Bountiful, UT (see BLFTB-20141014ABE)
- KUDD-FM4 Bountiful, UT (see BLFTB-20141105ABK)

Therefore, the applicant agrees to make sufficient measurements to establish that the operation of the booster is in compliance with the spurious emissions requirements of 47 C.F.R. Sections 73.317(b) through 73.317(d). All measurements will be made with all stations

simultaneously into the combined antenna and will be submitted to the Commission along with the FCC Form 350 application for license.

Since the proposed booster antenna is to be combined into the directional antenna of another previously authorized facility on the tower, it will have no effect on the antenna pattern of the other previously authorized facilities on the tower.

Downward Radiation Study (FM Model):

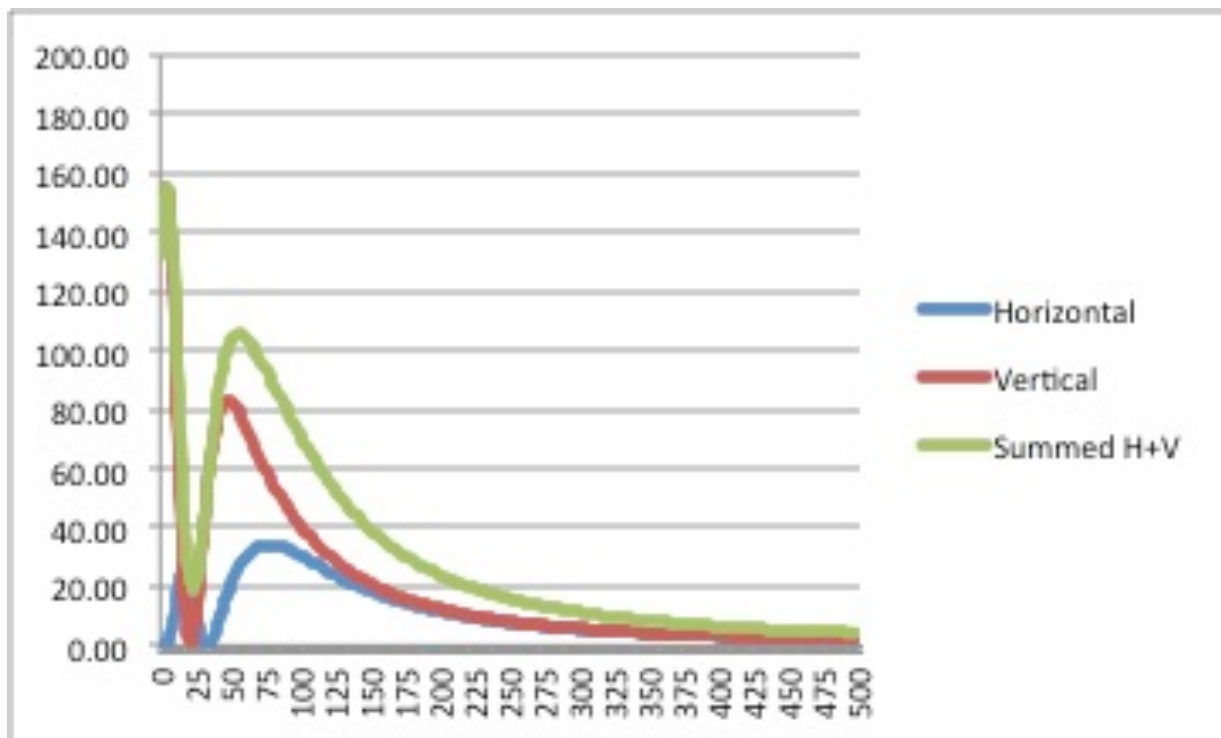
The proposed FM Facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OET Bulletin No. 65, Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields (OET Bulletin 65, Second Edition 97-01, August, 1997). The Commission's FM Model Power Density Prediction program was employed to determine the Field.

KBMG(FM) currently operates on Channel 291 from an antenna currently shared by the co-located stations listed above and proposes to move the Channel 292. KBMG(FM) operates at 1.2 kW ERP from the shared antenna with the 8 other boosters noted above which operate at various ERP's that, when summed, equal 15.949 kW.

The shared antenna is a Jampro JCPD 4H/3V panel antenna consisting of a single reflector with 4 each horizontally polarized dipole radiators mounted with 0.5 wavelength spacing and 3 pairs of vertically polarized dipole radiators mounted with 0.5 wavelength spacing. Such an antenna is not included in the Commission's FM Model RFR program. Therefore, RFR

compliance shall be demonstrated by using the Phelps-Dodge "Ring Stub" Worst Case antenna in FM Model. The chart below demonstrates the power density of each polarization individually as well as a summed RFR power density of both polarizations using data generated in FM Model and imported into a spreadsheet.

According to this data, the highest power density using the AGL height and summed ERP of all facilities on the shared antenna, the highest predicted power density 2 meters above ground is less than 78.0% of the Uncontrolled Standard with a Power Density of 155.24 microwatts per square centimeter 5 meters from the base of the tower.



The vertical plane radiation patterns created by panel antennas have been found to emit significantly lower amounts of downward radiation toward the ground when compared to worst-

case ring stub model sidemount antennas. Therefore, the predicted Power Density at ground level is expected to be less than that which is predicted by FM Model.

It should also be noted that the proposed minor modification merely proposes a change in frequency from 106.1 MHz to 106.3 MHz for the instant facility with no other changes to location, height, antenna model, or ERP. Therefore, no change is expected in the Power Density levels previously found to be compliant at the antenna site.

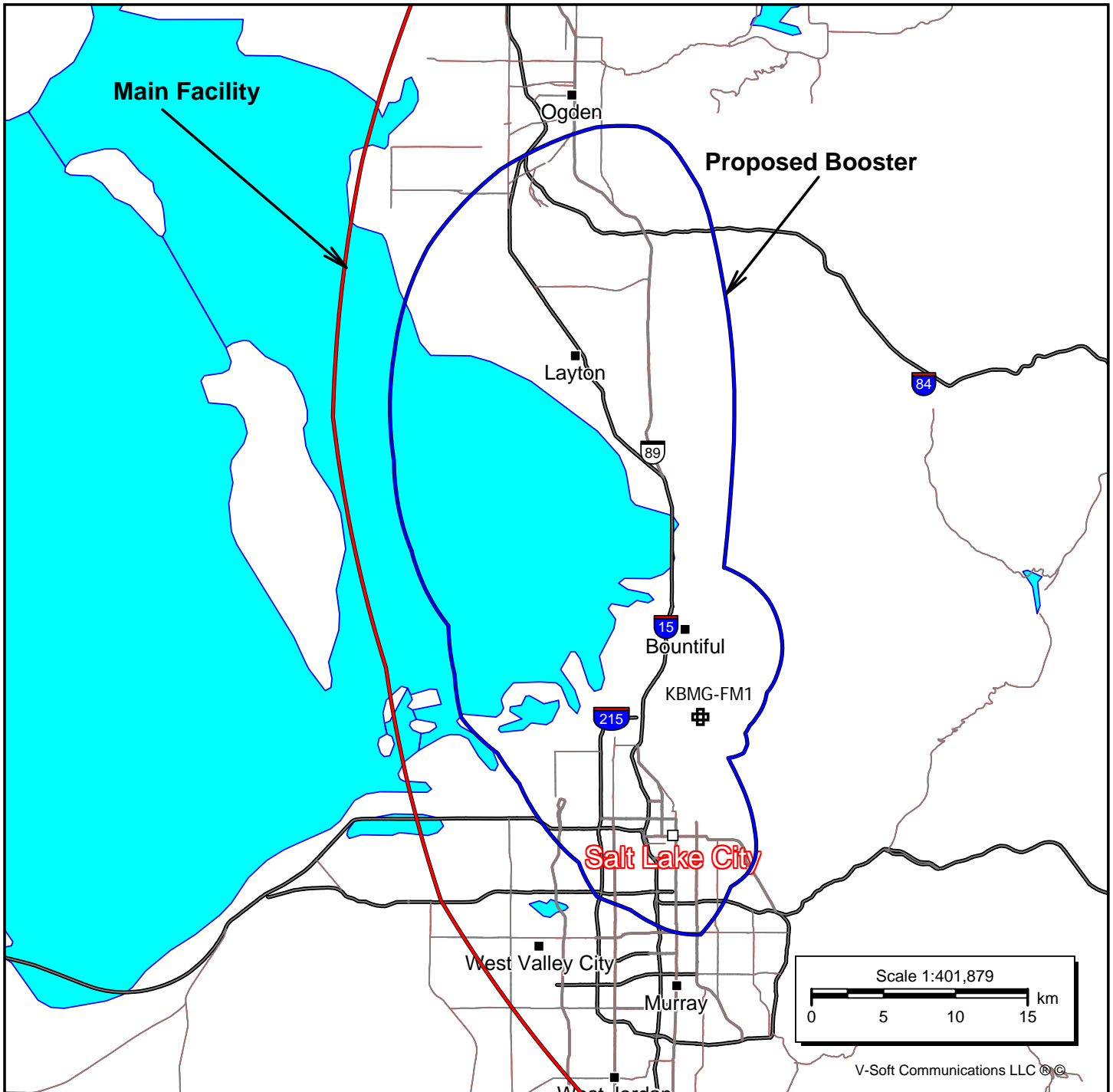
Even though the site will fully comply with the Uncontrolled Site Standards, access to the transmitting site will be restricted and appropriately marked with warning signs. When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shut down of power if necessary, 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 Booster Protected Contour**



V-Soft Communications LLC ©

KBMG-FM1

Proposed
Channel: 292D
Frequency: 106.3 MHz
Latitude: 40-50-05 N
Longitude: 111-52-03 W
COR AGL Height: 19.0 m
COR AMSL Height: 1828.0 m
Base Elevation: 1809.0 m
COR HAAT: 0.0 m
ERP: 1.20 kW
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

KBMG

Contemporaneously Proposed
Channel: 292C
Frequency: 106.3 MHz
Latitude: 40-52-16 N
Longitude: 110-59-43 W
COR AGL Height: 47.0 m
COR AMSL Height: 3330.0 m
Base Elevation: 3283.0 m
COR HAAT: 647.0 m
ERP: 89.00 kW
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

Exhibit 2

Section 74.1204 Interference Tabulations

KBMG FM1 Section 74.1204 Overlap Study

REFERENCE 40 50 05.0 N. 111 52 03.0 W.											
CH# 292D - 106.3 MHz, Pwr= 1.2 kW DA, HAAT= 0.0 M, COR= 1828 M Average Protected F(50-50)= 10.6 km Standard Directional											
DISPLAY DATES DATA 05-16-15 SEARCH 05-15-15											
CH CITY	CALL	TYPE STATE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT* (in km)
292C Evanston	AL2573	RSV-A	WY	86.6 267.1	73.66 RM11363	40 52 16.0 110 59 43.0	100.000 600	199.4 3261	92.8	-129.8*	-32.1*
Of Note: Allocation Change ordered for the instant facility in MB Docket 05-243.											
293C Spanish Fork	KAAZ-FM	LIC	CX UT	235.4 55.2	34.26 BLH20021125AAT	40 39 34.0 112 12 05.0	25.000 1140	139.0 2803	95.3	-117.9*	-81.2*
Of Note: Current authorization for KAAZ-FM operating under implied STA. **											
293C Spanish Fork	ALLO	USE	UT	185.3 5.2	61.79	40 16 50.0 111 56 05.0	100.000 600	139.9 2109	94.4	-93.1*	-55.5*
Of Note: Previous Allocation for KAAZ-FM as amended in 05-243											
291D Bountiful	KBMG-FM1!	LIC	DC UT	0.0 0.0	0.00 BLFTB20050316ABF	40 50 05.0 111 52 03.0	1.200	55.7 1828	36.7	-92.5	-92.5
Of Note: Current Authorization being instantly amended.											
291C Evanston	ALLO	USE	WY	84.8 265.4	73.78	40 53 28.0 110 59 44.0	100.000 600	142.6 3229	96.6	-72.9*	-28.8*
Of Note: Previous Allocation for instant facility as amended in 05-243											
291C Evanston	KBMG!	LIC	HX WY	86.6 267.1	73.66 BLH20040324AGC	40 52 16.0 110 59 43.0	89.000 647	139.2 3330	94.2	-69.6	-26.3
Of Note: Current Authorization of Main Facility operating under an implied STA that is being contemporaneously modified as ordered in MB Docket 05-243.											
290C Centerville	AL2516	RSV-A	UT	235.4 55.2	34.26 RM11363	40 39 34.0 112 12 05.0	100.000 600	15.4 2188	96.3	5.7	-64.4*
Of Note: Pending Application to implement channel change at Centerville, UT as ordered in MB Docket 05-243.											
294C Spanish Fork	AL2511	RSV-A	UT	235.4 55.2	34.26 RM11363	40 39 34.0 112 12 05.0	100.000 600	15.4 2188	96.3	5.7	-64.4*
Of Note: Reserved Allotment at Spanish Fork, UT, as ordered in Docket 05-243											
294C Spanish Fork	KAAZ-FM	APP	CX UT	235.4 55.2	34.26 BPH20150421AAU	40 39 34.0 112 12 05.0	25.000 1140	10.0 2803	95.3	11.1	-63.3*
Of Note: Pending Application to implement channel change at Spanish Fork, UT as ordered in MB Docket 05-243.											
290C Centerville	KNRS-FM	APP	CX UT	235.4 55.2	34.26 BPH20150421AAY	40 39 34.0 112 12 05.0	25.000 1140	10.0 2803	95.3	11.1	-63.3*
Of Note: Pending Application to implement channel change at Centerville, UT as ordered in MB Docket 05-243.											
289C Centerville	KNRS-FM	LIC	CX UT	235.4 55.2	34.26 BLH20021125AAS	40 39 34.0 112 12 05.0	25.000 1140	10.0 2803	95.3	11.1	-61.3*
Of Note: Current authorization for KNRS-FM operating under implied STA.											
291D Ogden	KBMG-FM4!	LIC	DC UT	348.2 168.1	57.58 BLFTB20050316ABA	41 20 32.0 112 00 30.0	0.500	37.2 1596	24.7	-20.9	-30.5
Of Note: Once the main facility ceases operations on Channel 291C, this booster will immediately change its frequency to Channel 292 as contemporaneously proposed.											
291D Salt Lake City	KBMG-FM2!	LIC	DC UT	212.2 32.2	3.50 BLFTB20090416ALS	40 48 29.0 111 53 23.0	2.100	5.3 1827	3.7	-15.9	-21.7
Of Note: Once the main facility ceases operations on Channel 291C, this booster will immediately change its frequency to Channel 292 as contemporaneously proposed.											
293D Park City	KAAZ-FM1	LIC	DC UT	85.8 266.0	32.76 BLFTB20070920ACC	40 51 20.3 111 28 47.7	1.000	35.8 2825	23.1	-7.1*	3.8
Of Note: Current authorization for KAAZ-FM1 operating under implied STA. **											
294D	KAAZ-FM1	APP	DC	85.8	32.76	40 51 20.0	1.000	0.5	23.1	28.2	8.1

Park City UT 266.1 BPFTB20150421AAV 111 28 48.0 2825 Citicasters Licenses, Inc.

Of Note: Pending Application to implement channel change at Spanish Fork, UT
as ordered in MB Docket 05-243.

290D KNRS-FM1 APP DC 85.8 32.76 40 51 20.0 1.000 0.5 23.1 28.2 8.1
Park City UT 266.1 BPFTB20150421ABB 111 28 48.0 2825 Citicasters Licenses, Inc.

Of Note: Pending Application to implement channel change at Centerville, UT
as ordered in MB Docket 05-243.

289D KNRS-FM1	LIC DC	85.8	32.76	40 51 20.0	1.000	0.5	23.1	28.2	9.3
Park City	UT	266.1	BLFTB20120123AMZ	111 28 48.0				2825 Citicasters Licenses, Inc.	
238C1 KYFO-FM«	LIC CN	326.3	55.55	41 14 59.0	100.000	18.6	5.6	21.5R	34.1M
Ogden	UT	146.0	BLED19981125KD	112 14 11.0	219	1509	Bible Broadcasting Network		
238C1 ALLO«	USE	326.5	56.05	41 15 17.0	100.000	18.6	5.6	21.5R	34.6M
Ogden	UT	146.3		112 14 14.0	299	1583			
238D K238AS«	LIC DV	132.4	44.90	40 33 44.0	0.218	18.6	5.6	9.5R	35.4M
Heber City	UT	312.6	BLFT20041203AEE	111 28 30.0	381	2564	Wasatch County Commission		
291D KBMG-FM3!	LIC DC	162.3	62.32	40 17 60.0	0.600	12.2	8.7	39.0	37.9
Provo	UT	342.4	BMLFTB20090416AMA	111 38 38.0		1641	Rocky Mountain Radio Netwo		
291C ALLO	USE	334.1	233.57	42 43 06.0	100.000	136.4	91.7	58.3	81.9
Rupert	ID	153.3		113 07 01.0	600	1952			

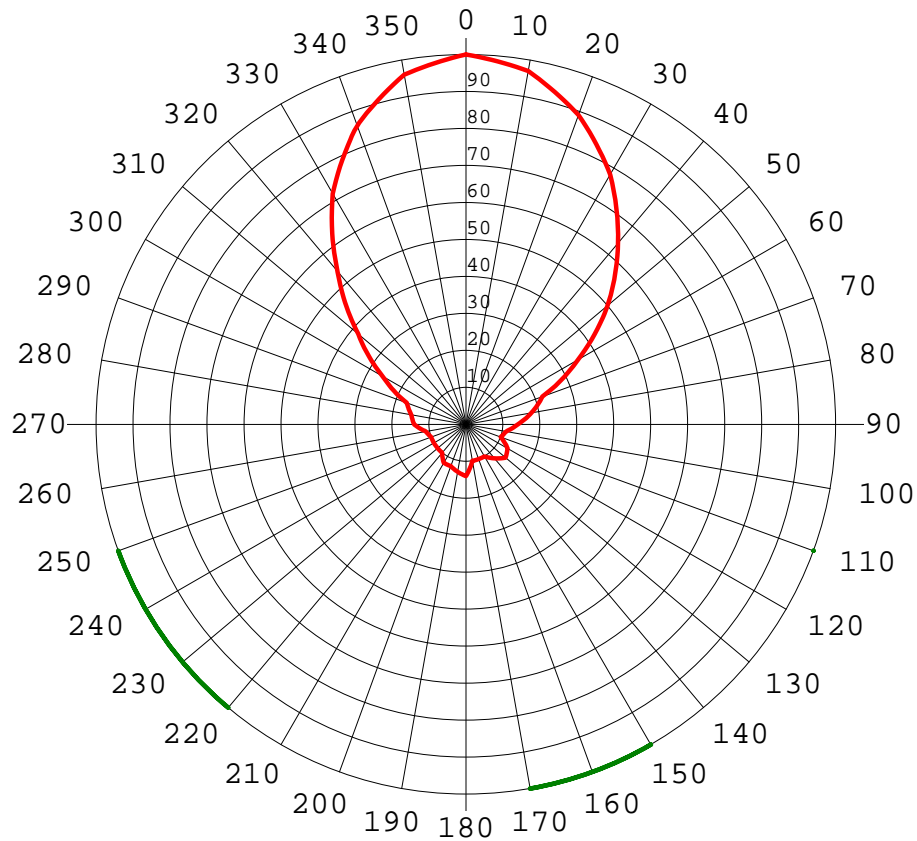
Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM
Contour distances are on direct line to and from reference station. Reference Zone= , Co to 3rd adjacent.
All separation margins (if shown) include rounding. Call signs with exclamation marks 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.

**The instantly proposed facility will not be able to commence program tests on Channel 292C until KAAZ-FM and KAAZ-FM1 both cease operations on Channel 293 and commence program tests on Channel 294. As such, the applicant respectfully requests its Construction Permit be issued with a special operating condition to this effect included.

Exhibit 4

Directional Antenna Azimuth Pattern

KBMG FM1 Azimuth Pattern



Azi	Rel	dBk	kW	dB	Azi	Rel	dBk	kW	dB
0	1.000	0.79	1.200	0.00	180	0.140	-16.29	0.024	-17.08
10	0.970	0.53	1.129	-0.26	190	0.130	-16.93	0.020	-17.72
20	0.890	-0.22	0.951	-1.01	200	0.120	-17.62	0.017	-18.42
30	0.780	-1.37	0.730	-2.16	210	0.120	-17.62	0.017	-18.42
40	0.640	-3.08	0.492	-3.88	220	0.100	-19.21	0.012	-20.00
50	0.500	-5.23	0.300	-6.02	230	0.100	-19.21	0.012	-20.00
60	0.350	-8.33	0.147	-9.12	240	0.100	-19.21	0.012	-20.00
70	0.220	-12.36	0.058	-13.15	250	0.100	-19.21	0.012	-20.00
80	0.180	-14.10	0.039	-14.89	260	0.110	-18.38	0.015	-19.17
90	0.140	-16.29	0.024	-17.08	270	0.140	-16.29	0.024	-17.08
100	0.110	-18.38	0.015	-19.17	280	0.150	-15.69	0.027	-16.48
110	0.100	-19.21	0.012	-20.00	290	0.170	-14.60	0.035	-15.39
120	0.130	-16.93	0.020	-17.72	300	0.260	-10.91	0.081	-11.70
130	0.140	-16.29	0.024	-17.08	310	0.380	-7.61	0.173	-8.40
140	0.120	-17.62	0.017	-18.42	320	0.540	-4.56	0.350	-5.35
150	0.100	-19.21	0.012	-20.00	330	0.720	-2.06	0.622	-2.85
160	0.100	-19.21	0.012	-20.00	340	0.860	-0.52	0.888	-1.31
170	0.100	-19.21	0.012	-20.00	350	0.960	0.44	1.106	-0.35

Rotation Angle = 0