

KZUS(FM)
Helena Valley NE, MT

Proposed Minor Modification
Of Licensed Facility

CONTINGENT Application Overview:

The instant application is part of a contemporaneously and contingently set of 301 applications submitted by Fisher Radio Regional Group Inc. (“Fisher”), licensee of KWGF(FM) Vaughn, MT, and The Montana Radio Company, LLC (Montana Radio”), licensee of KZUS(FM) Helena Valley NE, MT. In its application, Fisher proposes a one step upgrade for KWGF from Channel 269C3 to Channel 269C1. In order to eliminate the shortspacing that would otherwise be created when KWGF(FM) upgrades, KZUS(FM) agrees to contingently propose its own one step upgrade and mutually exclusive channel change from Channel 270A to Channel 272C2. Therefore, KZUS(FM) (FCC Facility ID# 164132) instantly proposes a one step upgrade from Channel 270A to Channel 272C2 at Helena Valley NE, MT, using the following parameters:

Tech Box:

Channel:	272
Class:	C2
Antenna Coordinates:	N46-49-30, W111-42-12 (NAD 27)
Allotment Ref. Coordinates:	N46-47-49, W111-40-32 (NAD 27)
ASRN:	N/A
Tower Height AGL:	45.7 m
COR AMSL:	2372 m
COR AGL:	15 m
COR HAAT:	655 m

COR HAAT:	655 m
ERP:	1.45 kW
Directional Antenna:	No

Allotment Modifications:

KZUS(FM) proposes a one step upgrade. Therefore, Exhibit 1 is an allotment reference site channel spacings study for KZUS(FM) on Channel 272C2 at Helena Valley NE, MT, demonstrating that the proposed facility is fully spaced pursuant to Section 73.207 towards all other authorizations, allotments, and proposals from the following location:

Allotment Reference Coordinates: N46-46-07, W112-01-21 (NAD 27)

Allotment Site City-Grade Coverage:

In accordance with the city grade coverage requirements of Section 73.315, Exhibit 2 demonstrates that the proposed allotment site provides requisite coverage of KZUS(FM)'s community of license – Helena Valley NE, MT. As can be seen in the Exhibit, 100% of Helena Valley NE's community boundaries are encompassed by the theoretical 70 dBu, circle contour. Also, no terrain obstructions are located between the antenna site and the community.

Suitable Allotment Reference Site:

In accordance with Note 1 to Section 73.3573, Exhibit 3 is a site map showing that the allotment reference site is located at a suitable location and is not offshore, in a national or state

park, on an airport or otherwise in an area which would necessarily present a hazard to air navigation.

Antenna Site City-Grade Coverage:

Exhibit 4 demonstrates that the proposed facility's antenna site provides city grade coverage of KZUS(FM)'s community of license – Helena Valley NE, MT. As can be seen in the Exhibit, 100% of Helena Valley NE's community boundaries are encompassed by the F(50,50) 70 dBu contour of the proposed facility. Also, no major terrain obstructions are located between the antenna site and the community.

Interference Study (Requesting Section 73.215 Contour Protection):

Exhibit 5 is a channel spacings study from the proposed KZUS(FM) antenna site. It notes that the proposed KZUS(FM) antenna site would otherwise be slightly shortspaced to:

-KMSO(FM) Missoula, MT 273C0 (see BLH-20090508ABN & BPH-20110330ACU)

Therefore, the applicant requests Section 73.215 contour protection processing.

KZUS(FM) is eligible to request 73.215 Contour Protection towards KMSO(FM) as it complies with the minimum separation requirements on its first adjacent channel at its proposed antenna site. The channel spacings study in Exhibit 5 shows that the proposed KZUS(FM) 272C2 antenna location is spaced 173.5 kilometers from the KMSO(FM) site. In order to be eligible for 73.215 Contour Protection, the minimum "C2 to C0" spacing for first adjacent

channel stations must be at least 163 kilometers. The proposed KZUS(FM) 272C2 antenna site satisfies this requirement by 10.5 kilometers.

Using the facilities proposed herein, KZUS(FM) 272C2 complies with the contour protection requirements of Section 73.215 towards KMSO(FM). The attached overlap tabulation studies and overlap map in Exhibit 5A demonstrates that this application complies with the contour protection requirements of Section 73.215.

In reviewing the attached studies, it should be noted that since KMSO(FM) does not utilize maximum Class C0 facilities, the following overlap studies were conducted assuming “Maximized” Class C0 Facilities for KMSO(FM) (100 kW at an HAAT of 450 meters).

Using the KZUS(FM) 272C2 technical parameters proposed in this application, Exhibit 5A demonstrates that the proposed KZUS(FM) F(50,50) 60 dBu Protected Contour does not overlap the F(50,10) 54 dBu Interfering Contour of KMSO(FM) operations on Channel 273C0. Likewise, Exhibit 5A demonstrates that the F(50,50) 60 dBu Protected Contour for KMSO(FM) does not overlap the proposed F(50,10) 54 dBu Interfering Contour of the instant KZUS(FM) application on 272C2. Therefore, it appears as though the instant application meets the requirements of Section 73.215 towards KMSO(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 ERI / Jampro "Rototiller" Antenna antenna with 4 sections and 0.5 wavelength spacing, and the AGL height and ERP proposed in this application as well as the pending application to share the combined antenna with KYYN(FM) in BPH-20101222ABQ (14.45 kW total ERP), the highest predicted power density 2 meters above ground is less than 71.56% of the Uncontrolled Standard with a Power Density of 143.12 microwatts per square centimeter 50.6 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 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

Allotment Reference Site Channel Spacings Study

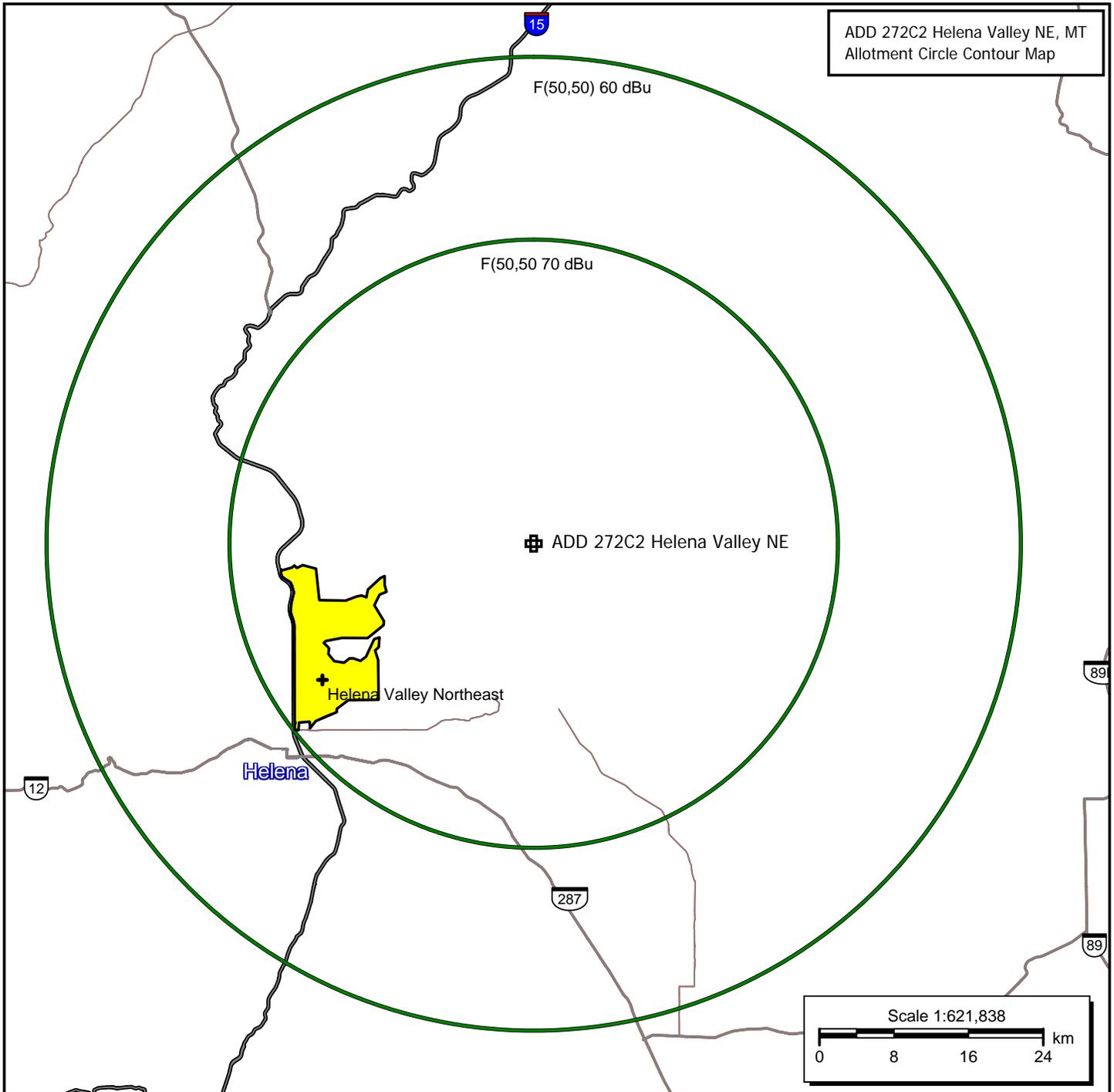
KZUS(FM) 272C2 Helena Valley NE, MT
 Section 73.207 Channel Study - Allotment Site

REFERENCE 46 47 49.0 N. CLASS = C2 Int = C1 DISPLAY DATES
 111 40 32.0 W. Current Spacings to 3rd Adj. DATA 05-27-11
 Channel 272 - 102.3 MHz SEARCH 05-27-11

Call	Channel	Location		Azi	Dist	FCC	Margin
KZUS	CP 270A	Helena Valley Ne	MT	263.3	26.7	54.5	-27.8
Of Note: KZUS has filed a license application for this mutually exclusive facility.							
KWGF	PRO 269C1	Vaughn	MT	14.8	93.2	78.5	14.7
Of Note: Contingently proposed Facility for KWGF(FM) at Vaughn							
KHFG-LP	LIC 270A	Helena	MT	235.1	34.8	54.5	-19.7
Of Note: By changing from Channel 270A to Channel 272C2, as proposed, will allow KHFG-LP to continue operations on Channel 270. The KZUS(FM) licensee does not object to KHFG-LP operating on its second adjacent channel.							
KMSO	LIC 273C0	Missoula	MT	271.3	175.7	175.5	0.21
KMSO	CP 273C0	Missoula	MT	271.3	175.7	175.5	0.21
KBMC	LIC 271C2	Bozeman	MT	166.2	132.6	129.5	3.1
KUHM	LIC 219A	Helena	MT	263.6	26.7	14.5	12.2
KINX	LIC 274C1	Fairfield	MT	14.8	93.2	78.5	14.7
KWGF	CP 269C3	Vaughn	MT	14.8	93.2	55.5	37.7
1428693	APP 274A	Whitetail	MT	205.6	107.4	54.5	52.9
AU9129276VAC	274A	Whitetail	MT	205.6	107.4	54.5	52.9

Exhibit 2

Allotment Reference Site City-Grade Coverage Map



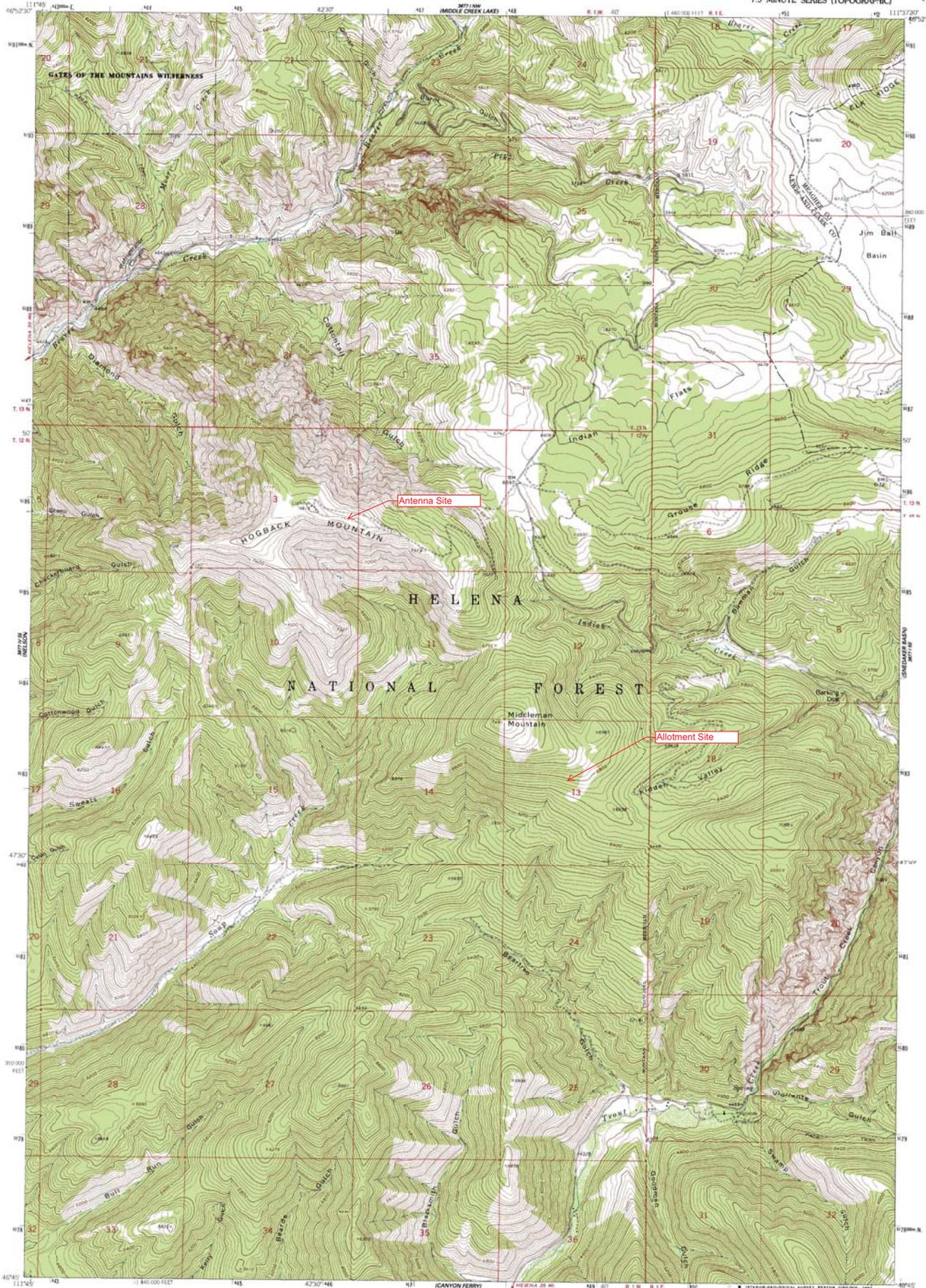
ADD 272C2 Helena Valley NE, MT
Allotment Circle Contour Map

ADD 272C2 Helena Valley NE

Channel: 272C2
 Frequency: 102.3 MHz
 Latitude: 46-47-49 N
 Longitude: 111-40-32 W
 COR AGL Height: 150.0 m
 COR AMSL Height: 2127.55 m
 Base Elevation: 1977.55 m
 COR HAAT: 415.96 m
 ERP: 50.00 kW
 Horiz. Pattern: Omni
 Vert. Pattern: No
 Prop Model: None

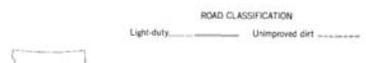
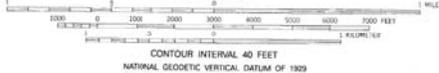
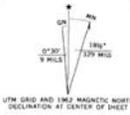
Exhibit 3

Allotment Reference Site Topographic Map



Mapped, edited, and published by the Geological Survey
Control by USGS and NOS/NOAA

Topography by photogrammetric methods from aerial
photographs taken 1955. Tied to sheet 1962.
Polyconic projection, 1927 North American Datum
10,000-foot grid based on Montana coordinate system,
central zone, 1000-meter Universal Transverse
Mercator grid ticks, zone 12, shown in blue.
The difference between 1927 North American Datum and
North American Datum of 1983 (NAD 83) for 7.5 minute
intersections is given in USGS Bulletin 187b. The NAD 83
is shown by dashed corner ticks.
There may be private inholdings within the boundaries of
the National or State reservations shown on this map.



THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY
DENVER, COLORADO 80226, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

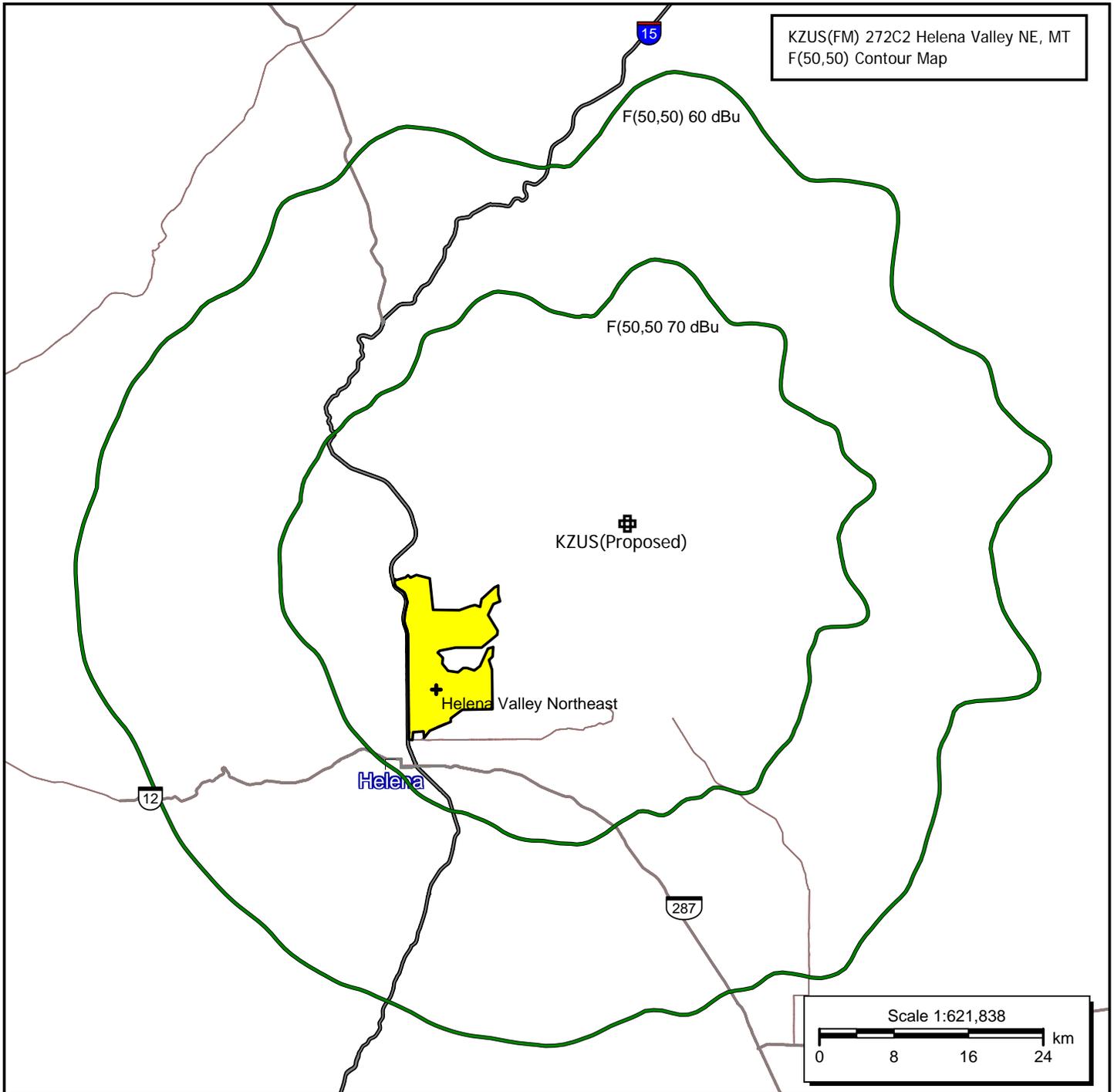
HOGBACK MOUNTAIN, MONT.
45111-06-17-024

1962
DMA 3677 1 SW-SERIES 1594

Exhibit 4

Proposed Antenna Site Contour Map:

**F(50,50) Protected Contour
F(50,50) City-Grade Contour**



KZUS(FM) 272C2 Helena Valley NE, MT
F(50,50) Contour Map

F(50,50) 60 dBu

F(50,50) 70 dBu

KZUS(Proposed)

Helena Valley Northeast

Helena



KZUS(Proposed)

Channel: 272C2
 Frequency: 102.3 MHz
 Latitude: 46-49-30 N
 Longitude: 111-42-12 W
 COR AGL Height: 15.0 m
 COR AMSL Height: 2372.0 m
 Base Elevation: 2357.0 m
 COR HAAT: 654.95 m
 ERP: 1.45 kW
 Horiz. Pattern: Omni
 Vert. Pattern: No
 Prop Model: None

Exhibit 5

Proposed Antenna Site Channel Spacings Study

KZUS(FM) 272C2 Helena Valley NE, MT
 Section 73.207 Channel Study - Antenna Site

REFERENCE 46 49 30.0 N. CLASS = C2 Int = B DISPLAY DATES
 111 42 12.0 W. Current Spacings to 3rd Adj. DATA 05-27-11
 Channel 272 - 102.3 MHz SEARCH 05-27-11

Call	Channel	Location		Azi	Dist	FCC	Margin
KZUS	CP 270A	Helena Valley Ne	MT	255.6	25.2	54.5	-29.3
Of Note: Current location of KZUS(FM) - pending license grant.							
KHFG-LP	LIC 270A	Helena	MT	228.9	35.1	54.5	-19.4
Of No Concern: Licensee does not object to KHFG-LP operating on its second adjacent channel.							
KMSO	LIC 273C0	Missoula	MT	270.2	173.5	175.5	-2.0
KMSO	CP 273C0	Missoula	MT	270.2	173.5	175.5	-2.0
Of Concern: Applicant requests Section 73.215 Contour Protection processing towards the co-located License and Permit of KMSO(FM).							
KBMC	LIC 271C2	Bozeman	MT	165.6	136.1	129.5	6.6
KUHM	LIC 219A	Helena	MT	255.9	25.2	14.5	10.7
KZUS	LIC 269C1	Highwood	MT	16.5	90.7	78.5	12.2
KINX	LIC 274C1	Fairfield	MT	16.5	90.7	78.5	12.2
KWGF	CP 269C3	Vaughn	MT	16.5	90.7	55.5	35.2
1428693	APP 274A	Whitehall	MT	203.8	109.3	54.5	54.8
AU9129276VAC	274A	Whitehall	MT	203.8	109.3	54.5	54.8

Exhibit 5A

Section 73.215 Contour Overlap Tabulations and Contour Overlap Map

KZUS(FM) 272C2

Vs:

KMSO(FM) 273C0

KZUS(FM) 272C2 vs KMSO(FM) 273C0
 Section 73.215 Contour Overlap Tabulations
 CH# 272C2 - 102.3 MHz, Pwr= 1.45 kW, HAAT= 655.0 M, COR= 2375.5 M
 Average Protected F(50-50)= 50.21 km
 Omni-directional

REFERENCE
 46 49 30.0 N.
 111 42 12.0 W.

DISPLAY DATES
 DATA 05-27-11
 SEARCH 05-27-11

CH CITY	CALL	TYPE STATE	ANT AZI	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
270A Helena Valley Ne	KZUS	CP MT	255.6 75.4	25.2 BPH20101222ABP	46 46 07.0 112 01 21.0	0.550 207	1.6 1515	24.9 The Montana Radio Company,	-36.3*	-2.3
269C1 Highwood	KZUS«	LIC MT	16.5 196.8	90.7 BMLH20101029ADG	47 36 24.0 111 21 31.0	100.000 273	10.1 1362	72.3 The Montana Radio Company,	78.5R	12.2M
270A Helena	KHFG-LP	LIC MT	228.9 48.6	35.1 BLL20101201AOM	46 37 02.0 112 02 56.0	0.100 -70	0.7 1201	8.9 Khfg-lp, Inc.	48.5R	-13.4M
273C0 Missoula	KMSO	LIC MT	270.2 88.6	173.5 BLH20090508ABN	46 48 30.0 113 58 38.0	100.000 450	114.5 1731	77.4 Sheila Callahan & Friends,	0.8	9.7
273C0 Missoula	KMSO	CP MT	270.2 88.6	173.5 BPH20110330ACU	46 48 30.0 113 58 38.0	100.000 450	114.5 1731	77.4 Sheila Callahan & Friends,	0.8	9.7
271C2 Bozeman	KBMC«	LIC MT	165.6 345.9	136.1 BLED19940223KA	45 38 18.0 111 16 05.0	20.500 222	87.1 1770	59.5 Montana State University -	129.5R	6.6M
219A Helena	KUHM	LIC MT	255.9 75.7	25.2 BLED19990507KB	46 46 11.0 112 01 22.0	0.910 232	158.3 1543	72.5 The University Of Montana	14.5R	10.7M
274C1 Fairfield	KINX«	LIC MT	16.5 196.8	90.7 BMLH20101029ADF	47 36 24.0 111 21 31.0	100.000 273	10.1 1362	72.3 The Montana Radio Company,	78.5R	12.2M
269C3 Vaughn	KWGF«	CP MT	16.5 196.8	90.7 BPH20101222ABN	47 36 24.0 111 21 31.0	3.500 273	3.3 1362	41.0 The Montana Radio Company,	55.5R	35.2M
274A Whitehall	1428693«	APP MT	203.8 23.4	109.3 BSFH20110210BCD	45 55 28.0 112 16 28.0	6.000 100	2.4 1867	24.2 Lopester Broadcasting	54.5R	54.8M
274A Whitehall	AU9129276«	VAC MT	203.8 23.4	109.3	45 55 28.0 112 16 28.0	6.000 100	2.4 1867	24.2 54.5R		54.8M

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.
 « = Station meets FCC minimum distance spacing for its class.
 < = Contour Overlap

KZUS(FM) 272C2 vs KMSO(FM) 273C0
Section 73.215 Contour Overlap Map

FMCommander Single Allocation Study - 05-27-2011 - NGDC 30 SEC
KZUS's Overlaps (In= 0.81 km, Out= 9.7 km)

KZUS CH 272 C2
Lat= 46 49 30.0, Lng= 111 42 12.0
1.45 kW 655 M HAAT, 2375.5 M COR
Prot.= 60 dBu, Intef.= 54 dBu

KMSO CH 273 C0 BLH20090508ABN
Lat= 46 48 30.0, Lng= 113 58 38.0
100.0 kW 450 M HAAT, 1730.6 M COR
Prot.= 60 dBu, Intef.= 54 dBu

