

EXHIBIT E-1  
TECHNICAL STATEMENT  
K274BW BERTHOUD, COLORADO  
MOUNTAIN COMMUNITY TRANSLATORS, LLC  
FCC FORM 349  
AUGUST 2008

This technical statement is made on behalf of Mountain Community Translators, LLC, licensee of K274BW Berthoud, Colorado. This application seeks to modify the existing facilities. It proposes to relocate the operation of K274BW to an existing owned tower site located at N. 40°-00'-43", W. 105°-11'-16", NAD 27.

K274BW proposes to operate on channel 274 with an Effective Radiated Power of 250 Watts horizontal and vertical polarization utilizing a Nicom model BKG77/2L, two bay, half wave spaced directional antenna system. The antenna will be mounted at the 48 meter level on a 50.9 meter overall tower, with a Center of Radiation at 1672 Above Mean Sea Level.

The new antenna will be located on a tower with other FM transmit antennas: K245AD, KCUV-FM2, and KJAC-FM1. The new antenna will have 11 meters of vertical separation to any of these antennas. Thus, there should be no meaningful effect to any of the antenna patterns used or proposed by this installation. Figure 11 is a statement in a letter from Kathrein Inc., Scala Division, the manufacturer of the antenna system for KJAC-FM1, which states that the proposed installation for K274BW will not cause any adverse effects on the directional radiation characteristics for KJAC-FM1. Figure 12 is a similar statement in a letter from NicomUsa Inc., the manufacturer of the antenna systems for K245AD and KCUV-FM2, which states that the proposed installation for

K274BW should not cause any adverse effects to the radiation characteristics for K245AD or KCUV-FM2.

Figure 1 shows a channel spacing study conducted from the proposed site for K274BW. In the second entry, there is an apparent short spacing with the currently licensed facilities of K274BW which will be replaced by this application. The only pertinent stations in terms of interference that require more study, are 3<sup>rd</sup> adjacent stations KCUV Greenwood Village, Colorado operating on channel 272A and its booster station, KCUV-FM2 Boulder, Colorado also on channel 272D. The other stations of interest are KBIQ Manitou Springs, Colorado on channel 274C, KTRR Loveland, Colorado on channel 273C2, and KARS-FM Laramie, Wyoming on Channel 275C1. Note: At the bottom of the study there is a stated protected zone issue with Table Mountain. The concern is that the site is 14.4 km away from the Table Mountain zone. According to FCC Rule 1.924 as of July 9, 2008, coordination is only recommended if the transmitter is in the range of 4.8 km up to 16 km from the Table Mountain zone and is transmitting with 1 kW or more. The proposed facilities are below this threshold with a maximum ERP of 250 Watts.

The proposed operation of K274BW is located within the protected 60 dB $\mu$  contours of 3<sup>rd</sup> adjacent channel stations KCUV Greenwood Village on channel 272A and a booster station for KCUV, KCUV-FM2 Boulder, Colorado on channel 272D. Figure 2 shows the predicted (F50,50) field strength of KCUV at the proposed K274BW transmitter site. This contour is 63.2 dB $\mu$ . Therefore, the respective predicted interfering contour generated by the proposed K274BW is 40 dB $\mu$  more than 63.2 dB $\mu$ , or 103.2 dB $\mu$ . The maximum distance from the transmitter to this contour is less than 766 meters.

Figure 3 shows the coverage for the 103.2 dB $\mu$  interference contour (F50,10) and shows that there is no population in the area of interference. The applicant, Mountain Community Translators, LLC, respectfully requests a waiver of C.F.R. 74.1204(d) of the Commission's rules based on the fact that there is no population within the area of predicted interference. There are no homes nearby the tower site and the road to the site is a gated private lane. The transmitter building is uninhabited and does not have indoor plumbing.

The KCUV-FM2 booster is located on the same site as the proposed facilities for K274BW. The KCUV-FM2 transmitter is located 11 meters below the proposed K274BW transmit antenna. KCUV-FM2 is operating at an ERP of 250 Watts while K274BW is proposed to also operate at an ERP of 250 Watts. Since the transmitters are located on the same antenna site with the KCUV-FM2, the signal of K274BW should never exceed the signal of KCUV-FM2 by more than 40 dB $\mu$  and cause any interference.

The applicant, Mountain Community Translators, LLC, respectfully requests a waiver of C.F.R. 74.1204(d) of the Commission's rules based on the fact that there is no population within the area of predicted interference because there is no actual area of predicted interference.

Figure 4 is a predicted coverage map showing the 40 dB $\mu$  interference contour (F50,10) of the proposed operation of K274BW and the 60 dB $\mu$  protected contour (F50,50) of KBIQ Manitou Springs. As can be seen, there is no prohibited overlap between these two contours.

Figure 5 is a predicted coverage map showing the 54 dB $\mu$  interference contour (F50,10) of the proposed operation of K274BW and the 60 dB $\mu$  protected contour

(F50,50) of KTRR Loveland. As can be seen, there is no prohibited overlap between these two contours.

Figure 6 is a predicted coverage map showing the 54 dB $\mu$  interference contour (F50,10) of the proposed operation of K274BW and the 60 dB $\mu$  protected contour (F50,50) of KARS-FM Laramie, Wyoming . As can be seen, there is no prohibited overlap between these two contours.

Figure 7 shows the overlap between the 60 dB $\mu$  contours of the proposed facilities, in red, and the current licensed facilities, in blue, for K274BW seeking to be modified by this application.

Figure 8 shows the antenna polar plot of the proposed directional antenna. Figure 9 is an antenna polar plot giving the power output at 10 degree intervals. The terrain of the 12 radials was studied for HAAT and the maximum ERP allowed for each radial and a summary is given in Figure 10. With the directional antenna system, the maximum ERP allowed is 250 Watts on all radials except the 60 degree azimuth, which is only 140 Watts. With the antenna pattern of the proposed facilities, the ERP on the 60 degree radial is less than 104 Watts. The antenna pattern does not exceed the maximum ERP allowed on any of the 12 pertinent radials.

It was concluded that the new proposed operation of K274BW Berthoud, Colorado will not cause any harmful interference to any existing stations, and will be in full compliance of the Commission's rules.

Exhibit E-1, Figure 1, Channel Study  
 K274BW Berthoud, Colorado  
 CH# 274D - 102.7 MHz, Pwr= 0.25 kw, HAAT= -15.2 M, COR= 1672 M  
 Average Protected F(50-50)= 7.09 km  
 Standard Directional

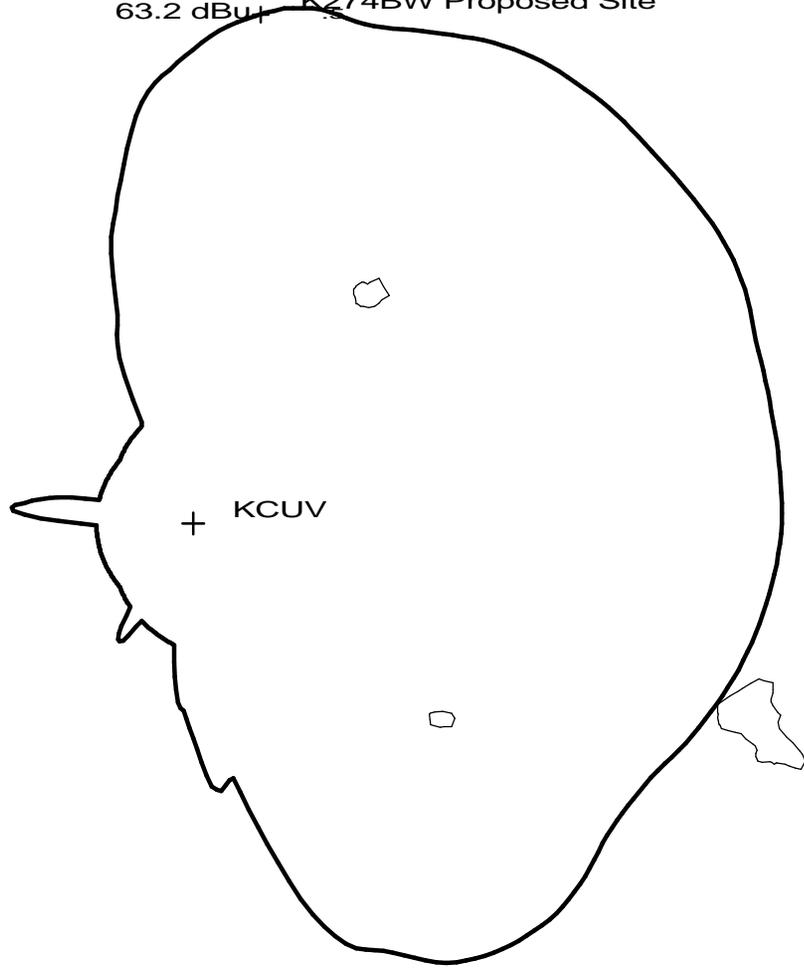
REFERENCE  
 40 00 43.0 N.  
 105 11 16.0 W.

DISPLAY DATES  
 DATA 07-11-08  
 SEARCH 07-13-08

CH CITY	CALL	TYPE STATE	ANT AZI -<--	DIST FILE #	LAT LNG	PWR (kw) HAAT (M)	INT(km) COR(M)	PRO(km) LICENSEE	*OUT* (Overlap in km)
274C Manitou Springs	KBIQ	LIC CO	_C_ 168.6 348.8	143.42 BMLH20030423AAT	38 44 43.0 104 51 39.0	72.000 695	210.7 2946	99.6 Bison Media, Inc.	20.47
274D Berthoud	K274BW	LIC CO	DV_ 32.6 212.6	10.48 BLFT20080506ABH	40 05 29.0 105 07 17.0	0.050	6.0 1617	1.9 Mountain Community Transla	-23.46
273C2 Loveland	KTRR	LIC CO	NCX 24.0 204.3	76.71 BLH20051107AEI	40 38 31.0 104 49 03.0	17.000 234	77.7 1793	52.8 Regent Broadcasting Of Ft.	11.23
272D Boulder	KCUV-FM2	LIC CO	DV_ 0.0 0.0	0.00 BLFTB20070725AEH	40 00 43.0 105 11 16.0	0.250	0.2 1661	5.0 Nrc Broadcasting, Inc.	-5.59*<
272A Greenwood Village	KCUV	LIC CO	DCX 187.6 7.6	31.24 BLH20070514AGO	39 43 59.0 105 14 10.0	1.000 238	2.0 2256	37.2 Nrc Broadcasting, Inc.	-7.04*<
275C1 Laramie	KARS-FM	LIC WY	_C_ 336.1 155.8	105.27 BLH20051031ABO	40 52 37.0 105 41 44.0	100.000 248	103.8 2999	71.3 Regent Broadcasting Of Ft.	24.54
271A Estes Park	KRKY-FM	LIC CO	_HX 324.1 143.8	47.95 BLH20070117AAE	40 21 38.0 105 31 12.0	6.000 25	3.7 2739	39.0 Nrc Broadcasting, Inc.	8.33
275D Fort Collins	KARS-FM1	LIC CO	DC_ 2.1 182.1	101.80 BLFTB20070718AEG	40 55 41.0 105 08 36.0	17.000	78.8 2100	53.7 Regent Broadcasting Of Ft.	35.03
275D Wheat Ridge	631520	APP CO	DE_ 209.2 29.1	31.31 BNPFT20030312AGW	39 45 57.0 105 21 59.0	0.011	8.3 2509	5.8 Educational Communications	15.46
220D Lafayette	K220IY	LIC CO	_C_ 23.7 203.8	27.69 BLFT20070212AAM	40 14 24.0 105 03 23.0	0.115	63.5 1637	42.4 10.0R Educational Communications	17.7M
276C0 Parker	KAVD	CP CO	_CX 120.6 301.3	103.88 BPH20070314ACY	39 31 57.0 104 08 48.0	100.000 448	12.2 2141	84.1 Coloradio, Inc.	18.69
274L1 Idaho Springs	KYGT-LP	LIC CO	_ 233.5 53.2	52.14 BLL20021003AAE	39 43 56.0 105 40 38.0	0.100 19	10.6 3018	2.2 Clear Creek Radio, Inc.	26.30
271D Fort Collins	KRKY-FM2	LIC CO	DC_ 0.6 180.6	53.49 BLFTB20070404AAP	40 29 37.0 105 10 53.0	0.065	0.5 2090	18.2 Nrc Broadcasting, Inc.	34.73
272D Idaho Springs	652181	APP CO	_C_ 224.9 44.7	42.56 BNPFT20030317MVZ	39 44 26.0 105 32 21.0	0.005	0.2 2625	2.7 Mitchell A. Beranek	38.80
272D Idaho Springs	1251314	APP CO	DV_ 214.1 33.9	45.16 BNPFT20080620AFF	39 40 31.0 105 29 02.0	0.010	0.0 3249	0.9 Mitchell A. Beranek	43.15
277D Fort Collins	650325	APP CO	DC_ 0.6 180.6	53.46 BNPFT20030317JQN	40 29 36.0 105 10 52.0	0.020	0.0 2075	4.3 Regent Broadcasting Of Ft.	48.59
221D Granby	K221EB	LIC CO	_C_ 277.5 97.1	64.78 BLFT20070406AAZ	40 05 09.0 105 56 27.0	0.250	63.5 2444	42.4 10.0R Cedar Cove Broadcasting, I	54.8M
221C2 Castle Rock	KJMN	LIC CO	NCX 170.2 350.3	70.61 BLH20050603AAV	39 23 07.0 105 02 52.0	42.000 163	63.5 2226	42.4 15.0R Entravision Holdings, Llc	55.6M
274D Dillon	K274AG	LIC CO	_CN 239.8 59.2	87.32 BLFT19950814TD	39 36 50.0 106 04 02.0	0.095 -345	18.3 2866	5.6 Nrc Broadcasting Mountain	58.00
273C2 Gypsum	KQSE	LIC CO	_C_ 258.0 77.0	141.19 BLH20080222ABW	39 44 18.0 106 47 58.0	0.480 660	63.5 3161	42.4 Wildcat Communications, L.	88.94
220D Frisco	K220ER	CP CO	_E_ 240.3 59.7	84.82 BMPFT20060113AAE	39 37 51.0 106 02 47.0	0.235	63.5 2793	42.4 10.0R Educational Communications	74.8M

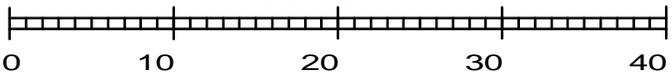
Terrain database is NGDC 30 SEC Distance + R = 73.215 or FCC Spacings in KM, Distance + M = Margin in KM  
 Contour distances are on direct line to and from reference station. Reference zone = 2. with 3rd Adj Channels.  
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)  
 Incoming contour overlap is ignored.  
 "\*"affixed to 'IN' or 'OUT' values = site inside protected contour.  
 "<" = Contour overlap  
 Reference station has protected zone issue: Table Mtn.

63.2 dBu | K274BW Proposed Site



1:500,000

Scale in km



KCUV 272A 1kW 2256M AMSL  
N. Lat. 39 43 59 W. Lng. 105 14 10

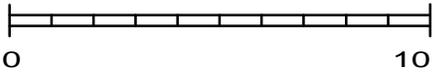
KCUV 272A  
- 07/08

Boulder



1:195,313

Scale in km



K274BW 274D .25kW 1672M AMSL  
N. Lat. 40 00 43 W. Lng. 105 11 16

Population: 0  
- 07/08

Exhibit E-1, Figure 4, K274BW vs KBIQ  
K274BW Berthoud, Colorado

FMCommander Single Allocation Study  
07-13-2008

K274BW	CH 274 D	KBIQ	CH 274 C	BMLH20030423AAT
0.25 kW	1672 M COR DA	72.0 kW	2946 M COR	
Prot. = 60 dBu		Prot. = 60 dBu		
Intef. = 40 dBu		Intef. = 40 dBu		

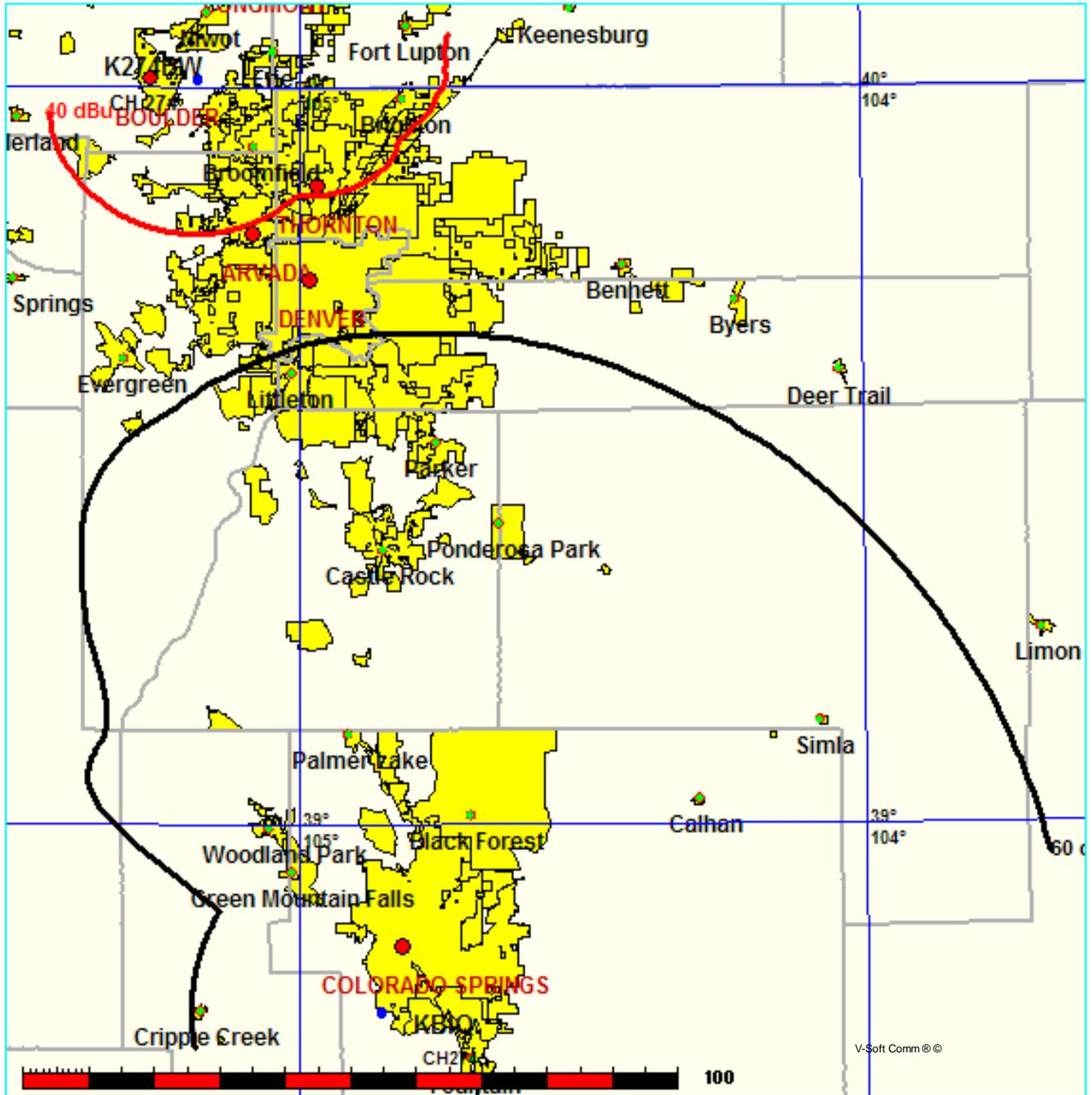


Exhibit E-1, Figure 5, K274BW vs KTRR  
K274BW Berthoud, Colorado

FMCommander Single Allocation Study  
07-13-2008

K274BW	CH 274 D	KTRR	CH 273 C2	BLH20051107AEI
0.25 kW	1672 M COR DA	17.0 kW,	1793 M COR	
Prot. = 60 dBu		Prot. = 60 dBu		
Intef. = 54 dBu		Intef. = 54 dBu		

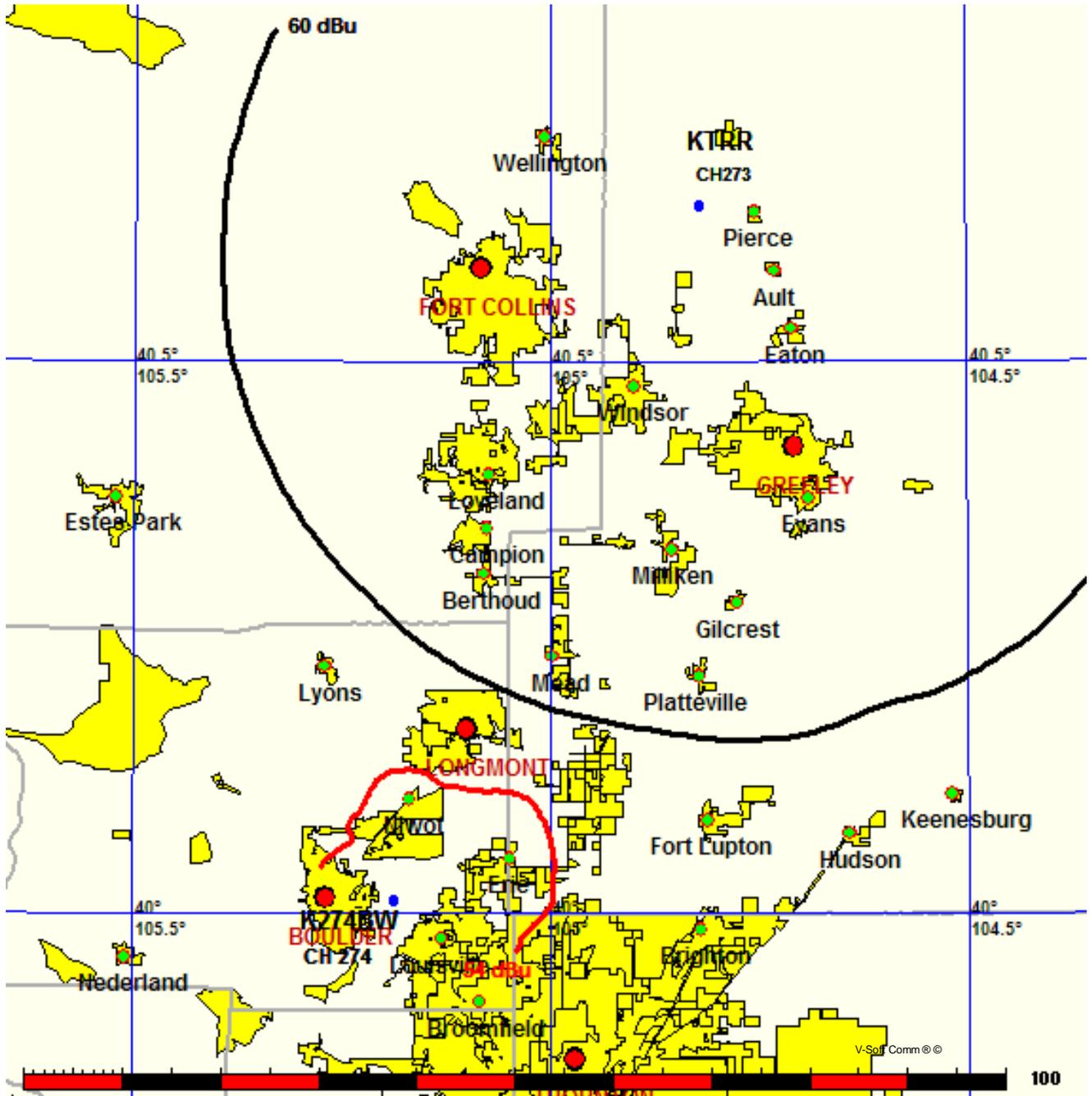


Exhibit E-1, Figure 6, K274BW vs KARS-FM  
K274BW Berthoud, Colorado

FMCommander Single Allocation Study  
07-13-2008

K274BW	CH 274 D	KARS-FM	CH 275 C1	BLH20051031ABO
0.25 kW	1672 M COR DA	100.0 kW	2999 M COR	
Prot. = 60 dBu		Prot. = 60 dBu		
Intef. = 54 dBu		Intef. = 54 dBu		

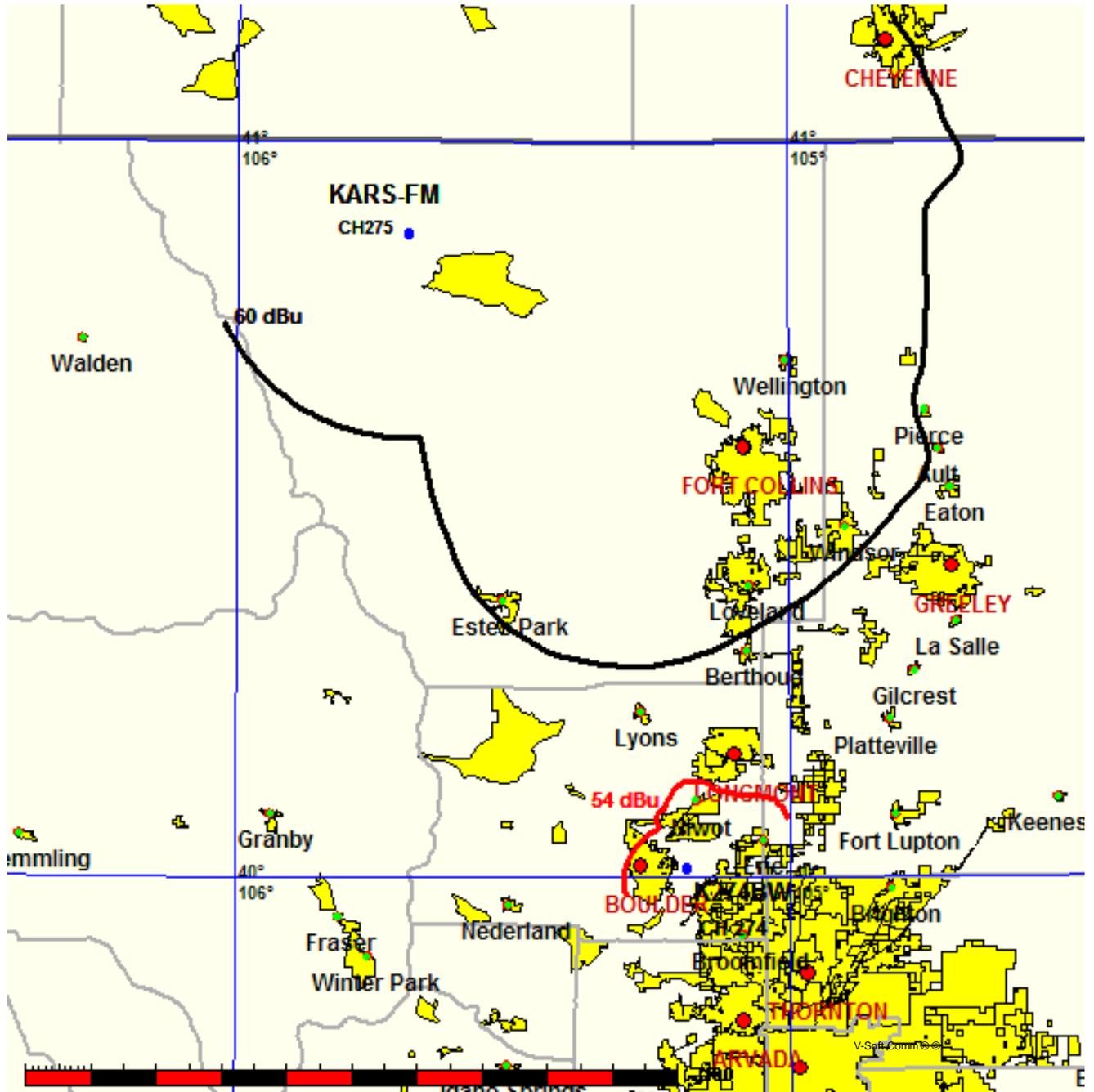
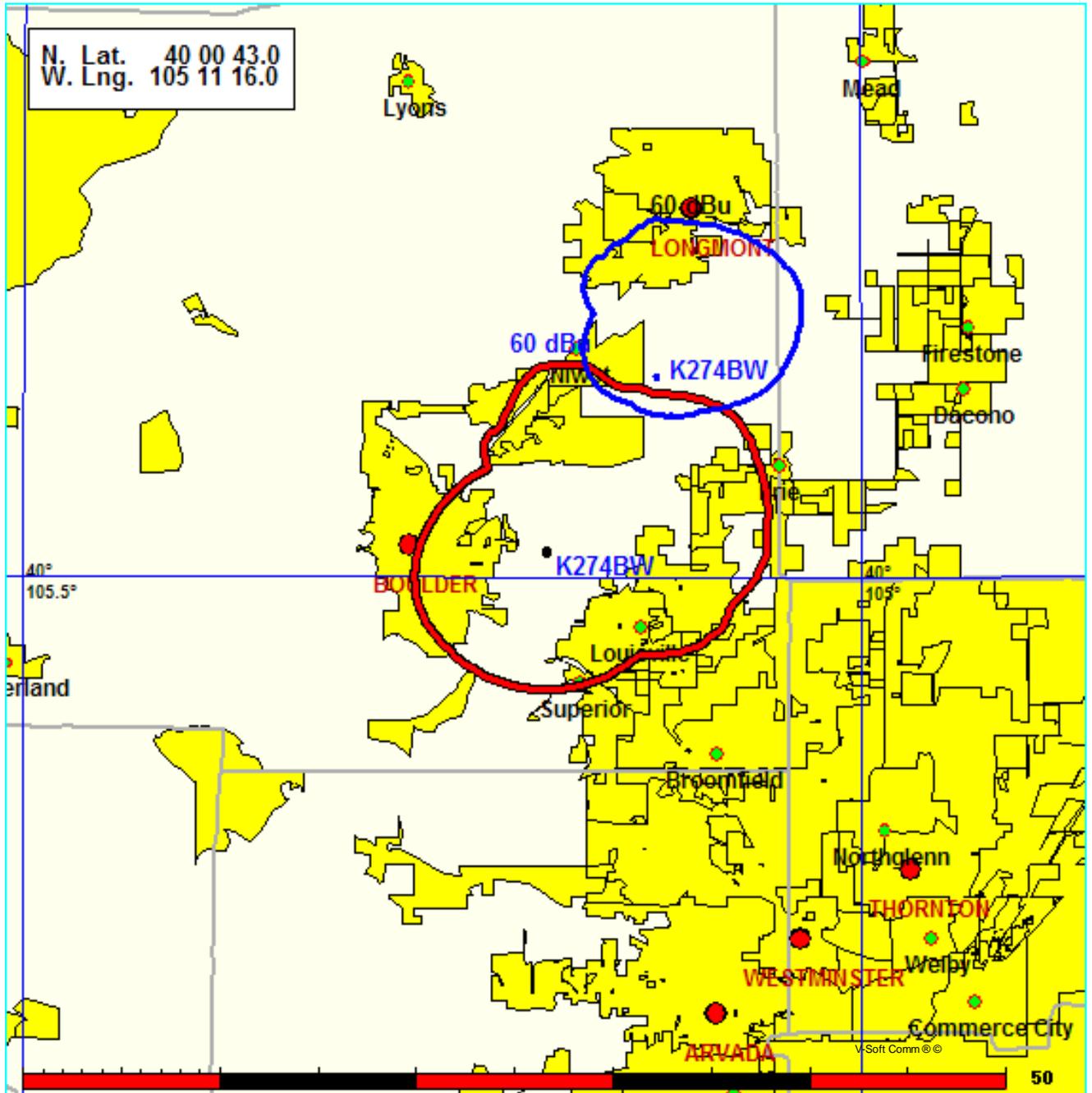


Exhibit E-1, Figure 7, Proposed vs Licensed  
K274BW Berthoud, Colorado

Coverage Study  
07-13-2008

K274BW CH274 D 0.05 kW 1617M COR  
Prot. = 60 dBu. Population = 15,164



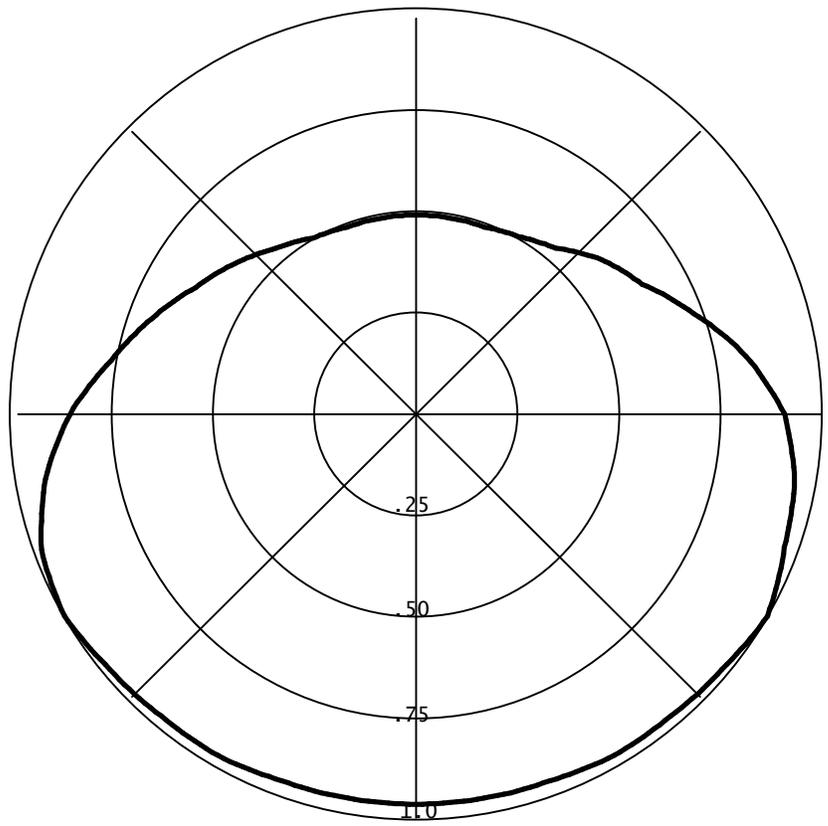
07-13-2008

RMS(V)= .811

Bearing    Field % Voltage

Graph is Percent Relative Field Voltage

000	=	0.493
010	=	0.493
020	=	0.493
030	=	0.507
040	=	0.536
050	=	0.596
060	=	0.643
070	=	0.728
080	=	0.826
090	=	0.908
100	=	0.947
110	=	0.966
120	=	1.000
130	=	0.984
140	=	0.976
150	=	0.976
160	=	0.966
170	=	0.966
180	=	0.966
190	=	0.966
200	=	0.966
210	=	0.976
220	=	0.976
230	=	0.984
240	=	1.000
250	=	0.982
260	=	0.927
270	=	0.852
280	=	0.762
290	=	0.692
300	=	0.627
310	=	0.581
320	=	0.536
330	=	0.504
340	=	0.493
350	=	0.493



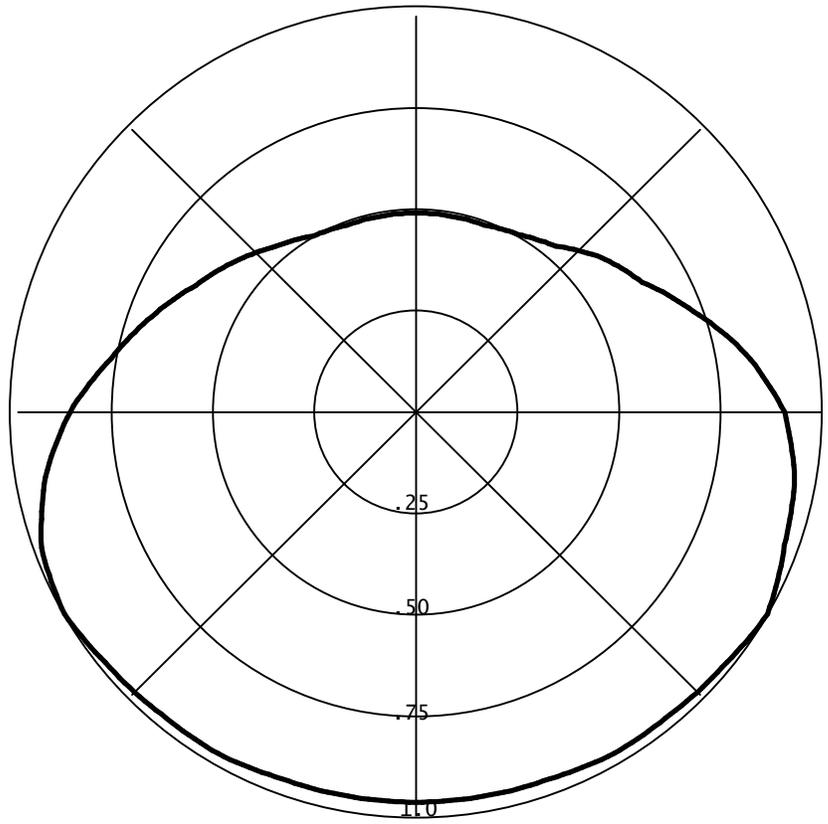
07-13-2008

RMS(V)= .811

Bearing      Field in kw

Graph is Percent Relative Field Voltage

000	=	0.061
010	=	0.061
020	=	0.061
030	=	0.064
040	=	0.072
050	=	0.089
060	=	0.103
070	=	0.132
080	=	0.171
090	=	0.206
100	=	0.224
110	=	0.233
120	=	0.250
130	=	0.242
140	=	0.238
150	=	0.238
160	=	0.233
170	=	0.233
180	=	0.233
190	=	0.233
200	=	0.233
210	=	0.238
220	=	0.238
230	=	0.242
240	=	0.250
250	=	0.241
260	=	0.215
270	=	0.181
280	=	0.145
290	=	0.120
300	=	0.098
310	=	0.084
320	=	0.072
330	=	0.064
340	=	0.061
350	=	0.061



K274BW

Coordinates: 40-00-43  
(NAD 27) 105-11-16

ERP 250  
HAAT -17  
RCAMSL 1672  
RCAGL 47.5

Nicom BKG77

Rotate: 180

12 Radial (degrees)	Radial Height (meters)	Allowed MERP (Watts)	Antenna Pattern	Radial Power (Watts)
0	107.2	250.0	0.493	60.8
30	106.1	250.0	0.507	64.3
60	132.0	140.0	0.643	103.4
90	83.8	250.0	0.908	206.1
120	49.6	250.0	1.000	250.0
150	4.6	250.0	0.976	238.1
180	-69.3	250.0	0.966	233.3
210	-132.7	250.0	0.976	238.1
240	-270.5	250.0	1.000	250.0
270	-120.0	250.0	0.852	181.5
300	-144.9	250.0	0.627	98.3
330	47.1	250.0	0.504	63.5

Maximum Effective Radiated Power (MERP)

Radial Interval (meters)	MERP (Watts)
107	250
108	118
119	130
131	144
145	157
158	173
174	192
193	212
213	235
236	260
261	285
286	310
311	345
346	380
381	425
426	480
481	540
541	10



**Antennas • Filters**

**Kathrein Inc., Scala Division**

P.O. Box 4580

Medford, OR 97501 USA

Phone: 541-779-6500

Fax: 541-779-6575

mail@kathrein.com

www.kathrein-scala.com

August 8, 2008

Mr. Kevin Youngers  
Certifying Engineer  
Mountain Community Translators, LLC  
87 Jasper Lake Rd  
Loveland, CO 80537  
Email: kevinyoungers@comcast.net

Ref: BPFT-20080717ALH  
Berthoud, Colorado

Dear Mr. Youngers,

Thank you for your technical brief and tower drawing describing the proposed installation of translator station antennas for station K274BW on the same structure as existing FM booster station KJAC-FM1.

It appears the vertical spacing proposed for this installation and the placement of the new feed line will not cause any adverse effects to the directional radiation characteristics of the existing antenna array.

This opinion carries no performance guarantee and is based solely on the data provided by Mountain Community Translators and the practical experience of our sales engineers. It is by no means a comprehensive analysis and Kathrein-Scala recommends Mountain Community Translators to engage the services of a qualified communications consulting firm for a definitive evaluation. The furnished data has not been verified by Kathrein-Scala for completeness or accuracy.

If we may be of further assistance, please do not hesitate to contact us.

Best regards,

Michael Wm. Bach, Sales Engineer  
Kathrein Inc., Scala Division  
Email: mbach@kathrein.com  
Ph: (541) 779 6500 Ext. 5128; Fx: (541) 779 3991  
Direct: (541) 618 5128  
MWB/jy



August 20, 2008

Mountain Community Translators  
Attn: Kevin J. Youngers  
1951 28th Ave Unit 29  
Greeley, CO 80634

Dear Mr. Youngers,

Thank you for your technical brief and tower drawing describing the proposed installation of translator station antennas for station K274BW on the same structure as existing translators K245AD and KCUV-FM2.

It appears the vertical spacing proposed for this installation and the placement of the new feed line should not cause any adverse effects to the radiation characteristics of the existing antenna array.

This opinion carries no performance guarantee and is based solely on the data provided by Mountain Community Translators and the practical experience of our sales engineers. It is by no means a comprehensive analysis and, Nicom USA recommends Mountain Community Translators to engage the services of a qualified communications consulting firm for a definitive evaluation. The furnished data has not been verified by Nicom USA for completeness or accuracy.

Sincerely,

A handwritten signature in black ink, appearing to read 'Franco Piagentini', written over a horizontal line.

Franco Piagentini  
Engineer