

**KUDD(FM)**  
**Randolph, UT**  
Proposed Minor Modification  
Of Licensed Facility

**CONTINGENT Application Overview:**

The following parties contemporaneously and contingently file 301 Applications:

- KQEO(FM) 300C1 (FCC Facility ID #87926) Idaho Falls, ID
- KAOX 296C1 (FCC Facility ID #31169) Shelley, ID
- KUDD(FM) 300C (FCC Facility ID #33438) Randolph, UT

In order for the proposed KQEO(FM) antenna site to be fully spaced under Section 73.207, it is contingent upon the grant of the contemporaneously and contingently proposed facilities for KAOX(FM) and KUDD(FM).

KUDD(FM) (FCC Facility ID# 33438) proposes to implement the Report and Order in MB Docket 05-243 and modify its currently Licensed Facilities using the following parameters:

**Tech Box:**

Channel:	300
Class:	C
Antenna Coordinates:	N40-52-16, W110-59-43 (NAD 27)
ASRN:	N/A
Tower Height AMSL:	58 m
COR AMSL:	3330 m

COR AMSL:	3330 m
COR AGL:	47 m
COR HAAT:	647 m
ERP:	Horizontally Polarized 89 kW
Directional Antenna:	Yes - see Exhibit 7

**Antenna Site City-Grade Coverage (Alternate Propagation Method):**

As can be seen in Exhibit 4, KUDD(FM)'s community of license, Randolph, UT, lies beyond the FCC predicted F(50,50) 70 dBu contour but completely within the FCC predicted F(50,50) 60 dBu contour on the 350 degree radial.<sup>1</sup> As shown in Exhibit 4, the F(50,50) 70 dBu community coverage contour is predicted to extend a radial distance of approximately 76 kilometers on the 350 degree radial toward Randolph, UT.

SPECIAL NOTE: It should be noted that station KDUT(FM) 272C Randolph, UT, is co-located with the proposed facilities of KUDD(FM) with an identical CORAMSL and "full field" ERP in the direction of Randolph, UT. The facilities of KDUT(FM) were previously found to meet the Commission's Antenna Site City Grade Coverage requirements (BMPH-20020214AAM). Therefore, the Applicant believes that the Commission Staff can also depend on the previous examination of the KDUT(FM) showing to satisfy the Community Coverage requirement instantly proposed without additional study. Nonetheless, the Applicant has included an Alternate Propagation Showing herein.

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<sup>1</sup> The predicted coverage contours for the proposed operation were calculated in accordance with the provisions of Section 73.313. Pursuant with current FCC practice, the distances to the contours were calculated without consideration given to terrain roughness correction factors. The average terrain elevations from 3 to 16 kilometers along eight radials evenly spaced at 45 degree intervals were obtained from the 30-second N.G.D.C. terrain database. The terrain elevations were then used in combination with the effective radiated power for determining the distances to coverage contours.

Even though the FCC predicted F(50,50) 70 dBu contour does not fully encompass Randolph, due to the drastic change in elevation between the transmitter site and Randolph, higher field strengths would be expected over the community than what FCC predicted contours would show. Therefore, the Longley-Rice alternate propagation model has been used to verify this expectation.

As can be seen on the map in Exhibit 4A, the first occurrence 73 dBu coverage contour, as predicted by Longley-Rice using the software code and input parameters as suggested by OET Bulletin 69, actually extends 99.8 kilometers on the 350 degree radial from the transmitter site, thereby easily covering the entire community of Randolph. The Community enjoys line of sight from the antenna site.

The topographic profile in Exhibit 4B further bolsters this assessment and shows that Longley-Rice actually predicts better than 87 dBu signal across the community of Randolph on the 350 degree azimuth.

Therefore, it is the undersigned's opinion that the instant application complies with Section 73.315 with respect to Community of License coverage.

Compliance with the Commission's current staff policies with respect to the application of the Longley-Rice alternate propagation model is met:

- The FCC predicted 60 dBu coverage contour entirely encompasses the community of license of Randolph (see Exhibit 4).
- The radial distance to the 70 dBu Longley-Rice propagation model contour exceeds the distance to the FCC F(50,50) 70 dBu contour by more than ten percent. In this case, the 73 dBu Longley-Rice propagation model Mean Occurrence contour exceeds the distance to the FCC F(50,50) 70 dBu contour by more than 31.0% on the 350 degree radial (see Exhibit 4A).
- The “delta-h” requirement is achieved along 350 degree radial as calculations indicate a delta-h value of 179 meters at 350 degrees when considering the elevations extending from 10 kilometers to 50 kilometers from the proposed transmitter site. This complies with the current Commission policy requiring a “delta-h” of less than 20 meters or greater than 100 meters in order to utilize an alternate propagation method to determine coverage such as Longley-Rice or FM Point to Point.

**Interference Study (Requesting Section 73.215 Contour Protection):**

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

-KBKL(LIC & CP) Grand Junction, CO 300C (see BLH-19980304KI & BPH-20070723AEK)

Therefore, the applicant requests Section 73.215 contour protection processing.

KUDD(FM) is eligible to request 73.215 Contour Protection towards KBKL(LIC & CP) as it complies with the minimum separation requirements on its Co channel at its proposed antenna site. The channel spacings study in Exhibit 5 shows that the proposed KUDD(FM) 300C antenna location is spaced 277.59 kilometers from the KBKL(LIC & CP) site. In order to be eligible for 73.215 Contour Protection, the minimum “C to C” spacing for Co channel stations must be at least 270 kilometers. The proposed KUDD(FM) 300C antenna site satisfies this requirement by 7.59 kilometers.

Using the facilities proposed herein, KUDD(FM) 300C complies with the contour protection requirements of Section 73.215 towards KBKL(LIC & CP). 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 KBKL(LIC & CP) does not utilize maximum Class C facilities, the following overlap studies were conducted assuming “Maximized” Class C Facilities for KBKL(LIC & CP) (100 kW at an HAAT of 600 meters).

Using the KUDD(FM) 300C technical parameters proposed in this application, Exhibit 5A demonstrates that the proposed KUDD(FM) F(50,50) 60 dBu Protected Contour does not overlap the F(50,10) 40 dBu Interfering Contour of KBKL(LIC & CP) operations on Channel 300C. Likewise, Exhibit 5A demonstrates that the F(50,50) 60 dBu Protected Contour for

KBKL(LIC & CP) does not overlap the proposed F(50,10) 40 dBu Interfering Contour of the instant KUDD(FM) application on 300C. Therefore, it appears as though the instant application meets the requirements of Section 73.215 towards KBKL(LIC & CP).

#### **Downward Radiation Study (Measure Upon Construction)**

Due to the fact that several existing and proposed emitters are located at or near the site, the applicant agrees to conduct a Radiofrequency Electromagnetic Field survey at the site upon construction of the proposed facility to ensure that any areas at ground level that exceed the Commission's exposure guideline values are appropriately marked and fenced. The results of the survey will be provided with the application for license.

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:**

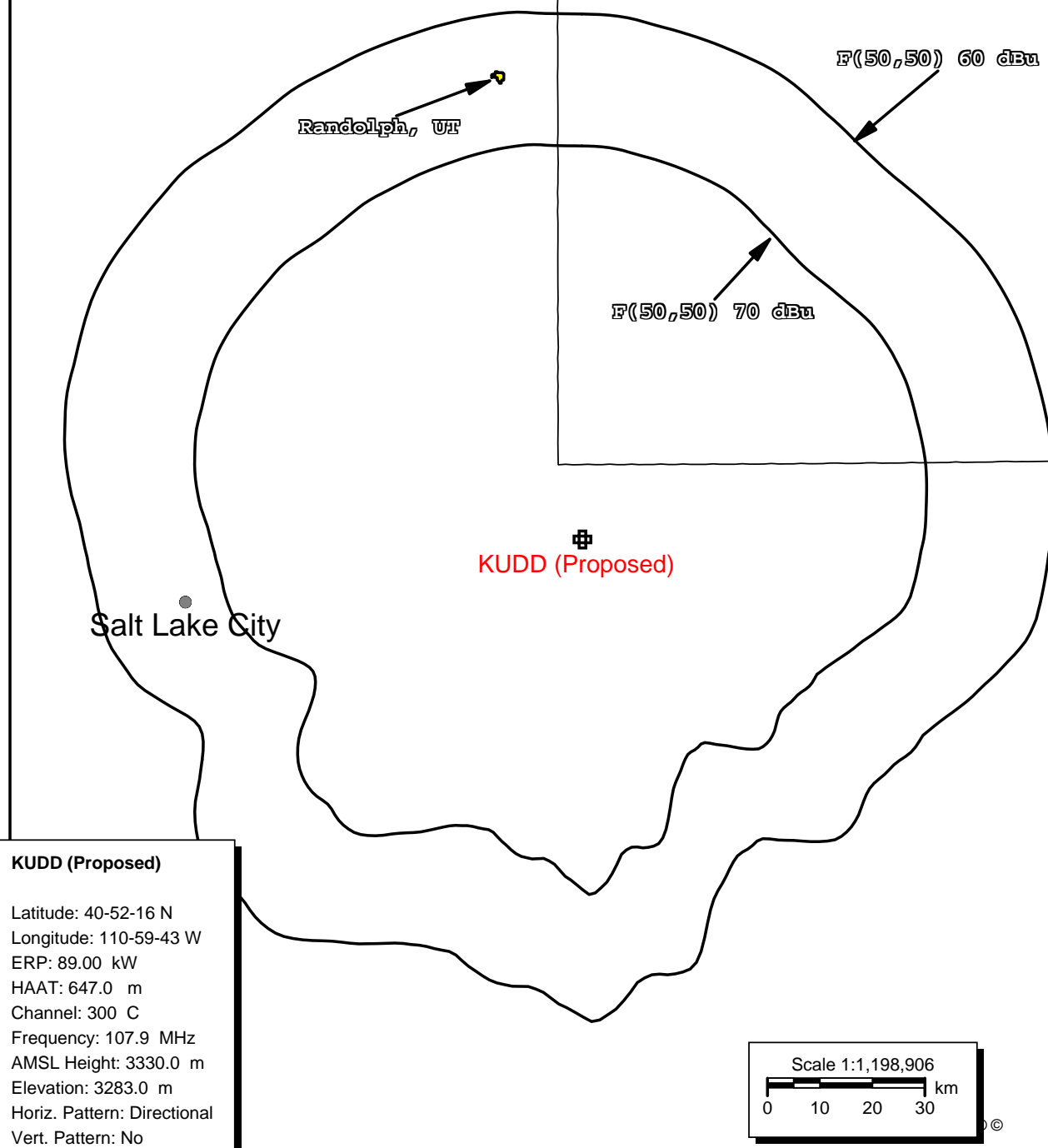
The proposed facility is exempt from environmental processing because the facility is not located at a location specified in Section 1.1307(a)(1)-(8) of the Commission's Rules and since the tower in question already exists.

## **Exhibit 4**

### **Proposed Antenna Site Contour Map:**

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

KUDD(FM) 300C Randolph, UT  
Community Coverage Contour Map



**KUDD (Proposed)**

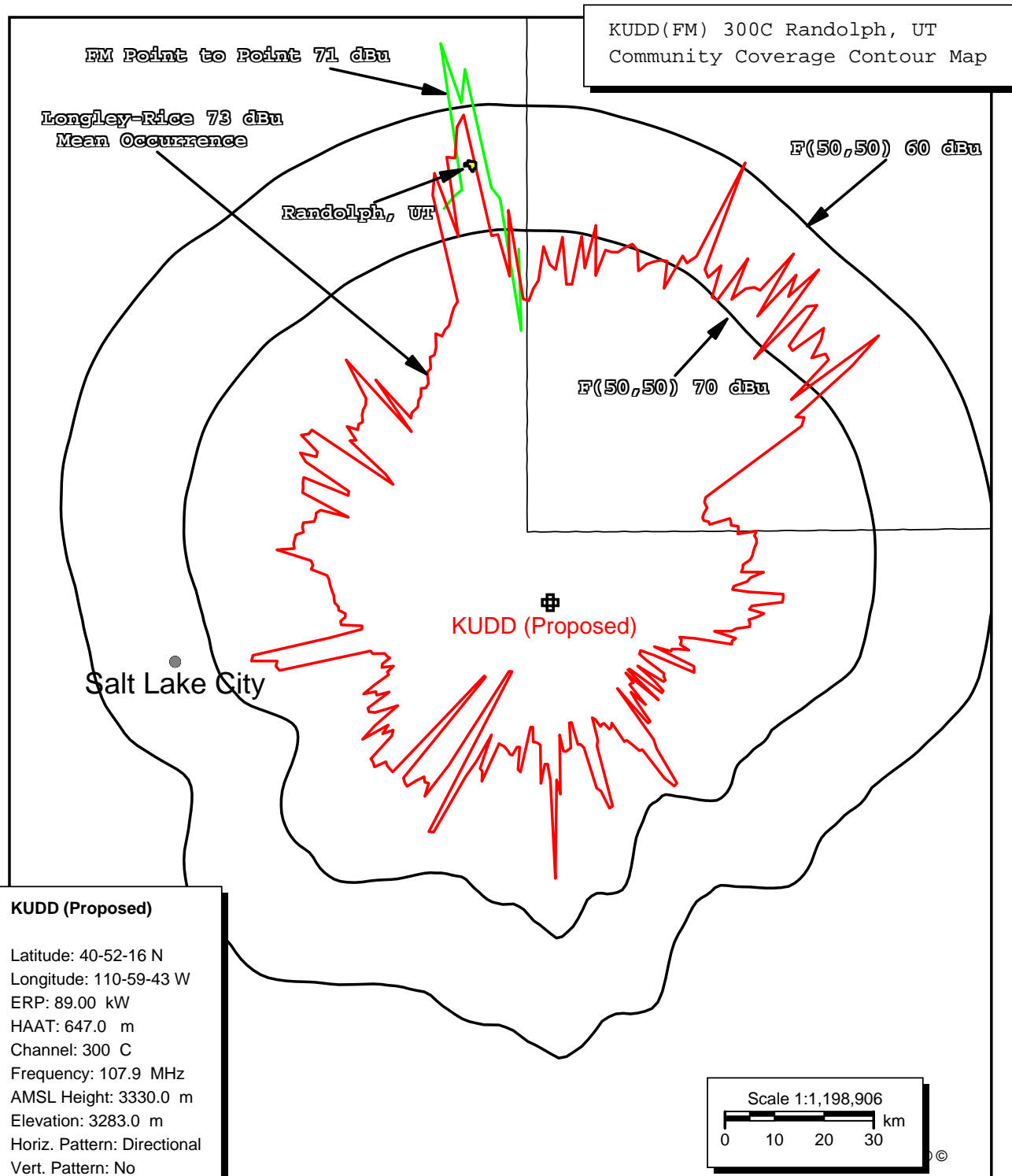
Latitude: 40-52-16 N  
Longitude: 110-59-43 W  
ERP: 89.00 kW  
HAAT: 647.0 m  
Channel: 300 C  
Frequency: 107.9 MHz  
AMSL Height: 3330.0 m  
Elevation: 3283.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: Longley/Rice  
Climate: Cont temperate  
Conductivity: 0.0150  
Dielec Const: 15.0  
Refractivity: 311.0  
Receiver Ht AG: 9.1 m  
Receiver Gain: 0 dB  
Time Variability: 50.0%  
Sit. Variability: 50.0%  
ITM Mode: Broadcast



# **Exhibit 4A**

**Alternate Propagation Method  
Coverage Map**

**Longley-Rice Method  
Mean Occurrence  
73 dBu Contour**



**KUDD (Proposed)**

Latitude: 40-52-16 N  
Longitude: 110-59-43 W  
ERP: 89.00 kW  
HAAT: 647.0 m  
Channel: 300 C  
Frequency: 107.9 MHz  
AMSL Height: 3330.0 m  
Elevation: 3283.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: Longley/Rice  
Climate: Cont temperate  
Conductivity: 0.0150  
Dielec Const: 15.0  
Refractivity: 311.0  
Receiver Ht AG: 9.1 m  
Receiver Gain: 0 dB  
Time Variability: 50.0%  
Sit. Variability: 50.0%  
ITM Mode: Broadcast

Radial: 350 degrees

Delta h: 179 meters

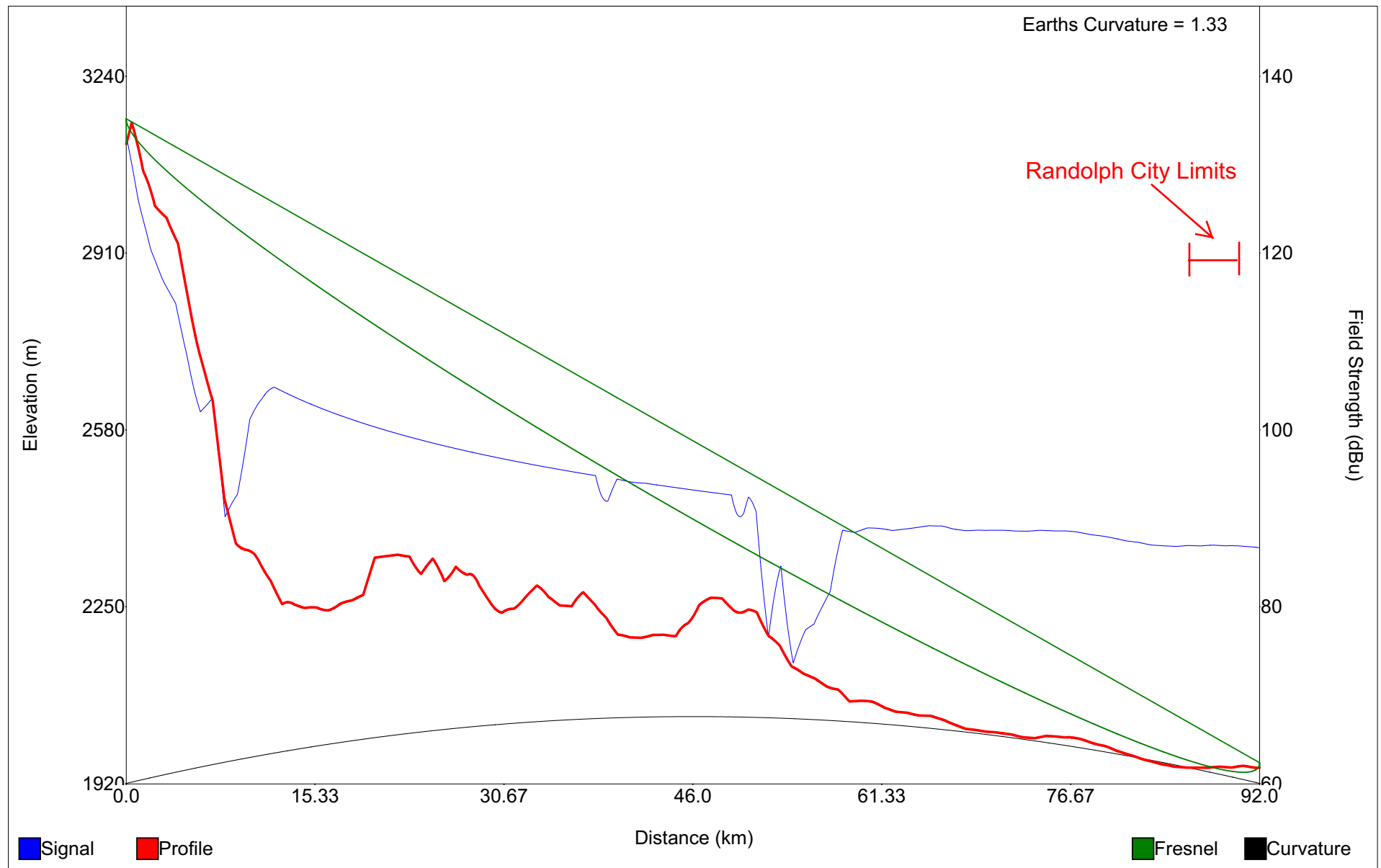
Longley-Rice Mean Occurrence: 73 dBu

FM Point to Point: 71 dBu

# **Exhibit 4B**

## **Alternate Propagation Method Profile Map to Randolph, UT**

# KUDD(FM) Profile to Randolph, UT



Starting Latitude: 40-52-16 N  
Starting Longitude: 110-59-43 W

End Latitude: 41-41-12.38 N  
End Longitude: 111-11-13.75 W

Distance: 92 km  
Bearing: 350 deg

Transmitter Height (AG) = 47.0 m  
Receiver Height (AG) = 9.1 m

Transmitter Elevation = 3113.6 m  
Receiver Elevation = 1949.1 m

Frequency = 107.9 MHz  
Fresnel Zone: 0.6

# **Exhibit 5**

## **Proposed Antenna Site Channel Spacings Study**

KUDD(FM) 300C Randolph, UT  
Section 73.207 Antenna Site Spacings Study

REFERENCE  
40 52 16.0 N.  
110 59 43.0 W.

CLASS = C  
Current Spacings

DISPLAY DATES  
DATA 02-26-08  
SEARCH 02-29-08

----- Channel 300 - 107.9 MHz -----

Call		Channel	Location		Azi	Dist	FCC	Margin
RADD	ADD	300C	Randolph	UT	340.7	24.59	289.5	-264.91
Of Note: Addition of Channel 300C at Randolph for KUDD(FM)'s use in MB Docket 05-243.								
RDEL	DEL	300C	Roy	UT	264.9	75.83	289.5	-213.67
KUDD	LIC	300C	Roy	UT	290.0	128.79	289.5	-160.71
Of Note: Current KUDD(FM) authorization at former Community of License.								
KBKL	LIC	300C	Grand Junction	CO	135.6	277.59	289.5	-11.91
KBKL	CP	300C	Grand Junction	CO	135.6	277.59	289.5	-11.91
Of Concern: Section 73.215 Contour Protection Processing requested towards KBKL(FM).								
RDEL	DEL	298C	Orem	UT	230.7	103.13	104.5	-1.37
KKAT-FM	LIC	298C	Orem	UT	230.7	103.13	104.5	-1.37
Of Note: Channel 298C was deleted at Orem in MB Docket 05-243.								
KKAT-FM	APP	298C	Kaysville	UT	257.4	104.51	104.5	0.01
Of Note: Contemporaneously and Contingently proposed antenna facilities for KKAT-FM.								
RADD	ADD	298C	Kaysville	UT	257.3	104.51	104.5	0.01
Of Note: Channel 298C was added at Kaysville for KKAT-FM's use in MB Docket 05-243.								
RDEL	DEL	297C2	Kemmerer	ID	20.7	115.04	104.5	10.54
KAOX	LIC	297C2	Kemmerer	WY	20.7	115.04	104.5	10.54
RDEL	DEL	297C2	Kemmerer	WY	20.7	115.04	104.5	10.54
KZHT	LIC	246C	Salt Lake City	UT	257.3	104.51	47.5	57.01

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# **Exhibit 5A**

## **Section 73.215 Contour Overlap Tabulations and Contour Overlap Map**

**KUDD(FM) 300C  
vs:  
KBKL(LIC & CP) 300C**

09-29-2008 30 Sec. Terrain Data

KUDD. A  
Channel = 300C  
Max ERP = 89 kW  
RCAMSL = 3330 M  
N. Lat = 405216.0  
W. Lng = 1105943.0

KBKL. C BPH20070723AEK  
Channel = 300C  
Max ERP = 100 kW  
RCAMSL = 2399.3 M  
N. Lat = 39 03 56  
W. Lng = 108 44 52

Protected  
60 dBu

Interfering  
40 dBu

Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Actual (dBu)
066.0	089.0000	0648.7	092.5	336.2	100.0000	0862.8	261.1	32.4
067.0	089.0000	0644.4	092.3	336.2	100.0000	0862.8	259.5	32.7
068.0	089.0000	0640.1	092.1	336.2	100.0000	0862.8	257.9	33.0
069.0	089.0000	0636.0	092.0	336.1	100.0000	0862.8	256.3	33.3
070.0	089.0000	0632.4	091.8	336.1	100.0000	0862.8	254.7	33.5
071.0	089.0000	0629.5	091.7	336.0	100.0000	0862.8	253.1	33.7
072.0	089.0000	0627.0	091.6	335.9	100.0000	0862.8	251.5	34.0
073.0	089.0000	0624.5	091.5	335.9	100.0000	0862.8	250.0	34.2
074.0	089.0000	0622.1	091.5	335.8	100.0000	0862.8	248.4	34.4
075.0	089.0000	0619.7	091.4	335.7	100.0000	0862.8	246.9	34.6
076.0	089.0000	0617.3	091.3	335.6	100.0000	0862.8	245.3	34.8
077.0	089.0000	0614.4	091.2	335.5	100.0000	0862.8	243.8	35.0
078.0	089.0000	0611.1	091.0	335.4	100.0000	0851.5	242.3	35.1
079.0	089.0000	0607.1	090.9	335.3	100.0000	0851.5	240.8	35.4
080.0	089.0000	0602.7	090.7	335.1	100.0000	0851.5	239.3	35.7
081.0	089.0000	0598.1	090.6	335.0	100.0000	0851.5	237.8	35.9
082.0	089.0000	0593.7	090.4	334.8	100.0000	0851.5	236.4	36.2
083.0	089.0000	0589.7	090.2	334.7	100.0000	0851.5	234.9	36.5
084.0	089.0000	0585.7	090.1	334.5	100.0000	0841.2	233.5	36.6
085.0	089.0000	0582.0	089.9	334.3	100.0000	0841.2	232.1	36.9
086.0	089.0000	0579.3	089.8	334.1	100.0000	0841.2	230.7	37.2
087.0	089.0000	0576.3	089.7	334.0	100.0000	0841.2	229.3	37.4
088.0	089.0000	0573.5	089.6	333.8	100.0000	0841.2	227.9	37.7
089.0	089.0000	0570.3	089.4	333.6	100.0000	0841.2	226.6	37.9
090.0	089.0000	0566.8	089.3	333.3	100.0000	0831.8	225.3	38.0
091.0	086.7010	0563.2	088.8	333.1	100.0000	0831.8	224.1	38.2
092.0	084.4322	0559.9	088.4	332.8	100.0000	0831.8	223.0	38.4
093.0	082.1934	0558.1	088.1	332.5	100.0000	0822.6	221.8	38.5
094.0	079.9847	0556.6	087.7	332.2	100.0000	0822.6	220.7	38.7
095.0	077.8060	0555.1	087.3	331.9	100.0000	0822.6	219.6	38.9
096.0	075.6575	0554.4	087.0	331.6	100.0000	0822.6	218.6	39.0
097.0	073.5390	0553.0	086.7	331.3	100.0000	0813.1	217.5	39.1
098.0	071.4506	0551.3	086.3	331.0	100.0000	0813.1	216.6	39.2
099.0	069.3923	0550.2	085.9	330.7	100.0000	0813.1	215.6	39.4
100.0	067.3641	0549.2	085.6	330.3	100.0000	0802.5	214.7	39.4
101.0	066.2844	0548.3	085.4	330.0	100.0000	0802.5	213.7	39.5
102.0	065.2135	0547.0	085.1	329.7	100.0000	0802.5	212.8	39.7
103.0	064.1513	0542.8	084.7	329.4	100.0000	0790.0	212.0	39.7
104.0	063.0978	0535.8	084.2	329.0	100.0000	0790.0	211.3	39.8
105.0	062.0530	0527.6	083.5	328.6	100.0000	0790.0	210.8	39.9
106.0	061.0170	0518.6	082.9	328.1	100.0000	0775.1	210.3	39.8
107.0	059.9896	0510.8	082.2	327.7	100.0000	0775.1	209.9	39.8
108.0	058.9710	0503.5	081.6	327.3	100.0000	0758.7	209.4	39.7
109.0	057.9612	0495.9	081.0	326.9	100.0000	0758.7	209.1	39.8
110.0	056.9600	0488.2	080.3	326.5	100.0000	0758.7	208.8	39.8
111.0	055.6856	0480.7	079.6	326.1	100.0000	0745.1	208.6	39.7
112.0	054.4256	0473.8	078.9	325.7	100.0000	0745.1	208.4	39.7
113.0	053.1801	0466.6	078.1	325.2	100.0000	0739.1	208.3	39.7
114.0	051.9489	0458.8	077.3	324.8	100.0000	0739.1	208.4	39.7
115.0	050.7322	0451.0	076.4	324.4	100.0000	0738.2	208.4	39.7
116.0	049.5299	0444.0	075.6	323.9	100.0000	0738.2	208.5	39.6
117.0	048.3420	0437.4	074.9	323.5	100.0000	0738.2	208.6	39.6
118.0	047.1686	0431.9	074.2	323.1	100.0000	0737.0	208.7	39.6
119.0	046.0095	0427.3	073.6	322.7	100.0000	0737.0	208.7	39.6
120.0	044.8649	0422.8	073.0	322.3	100.0000	0731.3	208.8	39.5
121.0	047.1815	0418.0	073.2	322.0	100.0000	0731.3	208.2	39.6
122.0	049.5565	0412.9	073.3	321.7	100.0000	0731.3	207.6	39.7
123.0	051.9897	0405.8	073.3	321.4	100.0000	0718.7	207.2	39.6
124.0	054.4813	0395.6	073.1	321.0	100.0000	0718.7	207.0	39.7
125.0	057.0312	0384.3	072.8	320.7	100.0000	0718.7	207.0	39.7
126.0	059.6394	0374.8	072.6	320.3	100.0000	0700.2	206.9	39.5
127.0	062.3060	0368.4	072.6	320.0	100.0000	0700.2	206.6	39.5
128.0	065.0308	0362.1	072.6	319.6	100.0000	0700.2	206.4	39.6
129.0	067.8139	0354.6	072.5	319.3	100.0000	0677.9	206.3	39.3



130.0	070.6554	0347.8	072.4	318.9	100.0000	0677.9	206.2	39.4
131.0	072.3947	0344.2	072.4	318.6	100.0000	0677.9	206.0	39.4
132.0	074.1551	0344.6	072.7	318.2	100.0000	0655.2	205.6	39.2
133.0	075.9367	0347.7	073.1	317.9	100.0000	0655.2	205.1	39.3
134.0	077.7395	0352.2	073.7	317.5	100.0000	0655.2	204.4	39.4
135.0	079.5634	0356.7	074.2	317.2	100.0000	0636.7	203.8	39.3
136.0	081.4084	0359.4	074.7	316.8	100.0000	0636.7	203.4	39.4
137.0	083.2746	0360.0	074.9	316.5	100.0000	0625.0	203.1	39.3
138.0	085.1619	0358.3	075.1	316.1	100.0000	0625.0	203.1	39.3
139.0	087.0704	0354.5	075.0	315.7	100.0000	0625.0	203.2	39.3
140.0	089.0000	0347.5	074.7	315.4	100.0000	0618.1	203.6	39.1
141.0	089.0000	0337.4	074.0	315.0	100.0000	0618.1	204.5	39.0
142.0	089.0000	0325.5	073.1	314.7	100.0000	0618.1	205.5	38.8
143.0	089.0000	0312.3	072.1	314.4	100.0000	0610.0	206.7	38.5
144.0	089.0000	0298.0	071.0	314.1	100.0000	0610.0	207.9	38.2
145.0	089.0000	0285.2	070.0	313.8	100.0000	0610.0	209.2	38.0
146.0	089.0000	0274.7	069.1	313.6	100.0000	0610.0	210.3	37.8
147.0	089.0000	0264.5	068.3	313.3	100.0000	0596.8	211.4	37.5
148.0	089.0000	0252.6	067.3	313.1	100.0000	0596.8	212.7	37.2
149.0	089.0000	0242.9	066.5	312.9	100.0000	0596.8	213.8	37.1
150.0	089.0000	0240.9	066.4	312.6	100.0000	0596.8	214.3	37.0
151.0	089.0000	0244.7	066.7	312.3	100.0000	0579.7	214.3	36.7
152.0	089.0000	0246.9	066.8	311.9	100.0000	0579.7	214.6	36.7
153.0	089.0000	0247.0	066.9	311.7	100.0000	0579.7	215.0	36.6
154.0	089.0000	0249.9	067.1	311.3	100.0000	0562.2	215.2	36.4
155.0	089.0000	0258.2	067.8	311.0	100.0000	0562.2	215.1	36.4
156.0	089.0000	0269.4	068.7	310.6	100.0000	0562.2	214.8	36.4
157.0	089.0000	0282.1	069.8	310.2	100.0000	0545.0	214.4	36.3
158.0	089.0000	0294.2	070.7	309.8	100.0000	0545.0	214.1	36.3
159.0	089.0000	0306.6	071.7	309.3	100.0000	0527.5	213.9	36.2
160.0	089.0000	0322.8	072.9	308.9	100.0000	0527.5	213.6	36.2
161.0	089.0000	0346.1	074.6	308.4	100.0000	0509.4	212.9	36.1
162.0	089.0000	0375.8	076.8	307.7	100.0000	0509.4	211.8	36.3
163.0	089.0000	0409.4	079.3	307.0	100.0000	0492.5	210.6	36.3
164.0	089.0000	0441.3	081.6	306.3	100.0000	0478.2	209.7	36.2
165.0	089.0000	0465.6	083.4	305.7	100.0000	0478.2	209.2	36.3
166.0	089.0000	0479.6	084.3	305.2	100.0000	0467.8	209.5	36.1
167.0	089.0000	0483.3	084.6	304.9	100.0000	0467.8	210.3	36.0
168.0	089.0000	0483.6	084.6	304.6	100.0000	0467.8	211.3	35.8
169.0	089.0000	0481.6	084.4	304.4	100.0000	0461.0	212.4	35.5
170.0	089.0000	0475.5	084.1	304.2	100.0000	0461.0	213.8	35.2
171.0	089.0000	0473.5	083.9	303.9	100.0000	0461.0	214.9	35.0
172.0	089.0000	0479.4	084.3	303.6	100.0000	0461.0	215.8	34.9
173.0	089.0000	0490.7	085.0	303.2	100.0000	0457.2	216.5	34.7
174.0	089.0000	0518.4	086.7	302.6	100.0000	0457.2	216.6	34.7
175.0	089.0000	0545.6	088.2	302.0	100.0000	0456.5	216.9	34.6
176.0	089.0000	0575.8	089.7	301.5	100.0000	0456.5	217.4	34.6
177.0	089.0000	0599.4	090.6	301.1	100.0000	0459.0	218.2	34.5
178.0	089.0000	0624.3	091.5	300.6	100.0000	0459.0	219.0	34.3
179.0	089.0000	0631.3	091.8	300.4	100.0000	0464.2	220.2	34.2
180.0	089.0000	0607.7	090.9	300.4	100.0000	0464.2	222.1	33.9
181.0	089.0000	0584.2	090.0	300.4	100.0000	0464.2	223.9	33.6
182.0	089.0000	0565.0	089.2	300.4	100.0000	0464.2	225.6	33.2
183.0	089.0000	0551.9	088.6	300.4	100.0000	0464.2	227.3	32.9
184.0	089.0000	0533.1	087.5	300.4	100.0000	0464.2	229.1	32.6
185.0	089.0000	0516.4	086.5	300.5	100.0000	0464.2	230.9	32.3
186.0	089.0000	0508.2	086.1	300.5	100.0000	0464.2	232.5	32.0
187.0	089.0000	0502.7	085.7	300.4	100.0000	0464.2	234.0	31.7
188.0	089.0000	0505.5	085.9	300.2	100.0000	0464.2	235.3	31.5
189.0	089.0000	0509.0	086.1	300.1	100.0000	0464.2	236.6	31.3
190.0	089.0000	0508.0	086.0	300.0	100.0000	0464.2	238.0	31.0
191.0	089.0000	0507.0	086.0	299.9	100.0000	0464.2	239.5	30.8
192.0	089.0000	0502.3	085.7	299.8	100.0000	0464.2	241.0	30.5
193.0	089.0000	0494.2	085.2	299.8	100.0000	0464.2	242.5	30.2
194.0	089.0000	0484.7	084.6	299.9	100.0000	0464.2	244.1	30.0
195.0	089.0000	0476.4	084.1	299.9	100.0000	0464.2	245.7	29.7
196.0	089.0000	0466.4	083.5	300.0	100.0000	0464.2	247.2	29.5
197.0	089.0000	0455.9	082.7	300.1	100.0000	0464.2	248.8	29.3
198.0	089.0000	0452.2	082.4	300.1	100.0000	0464.2	250.3	29.1
199.0	089.0000	0455.2	082.6	300.0	100.0000	0464.2	251.6	28.9
200.0	089.0000	0457.8	082.8	299.9	100.0000	0464.2	253.0	28.7
201.0	089.0000	0459.6	083.0	299.8	100.0000	0464.2	254.4	28.5
202.0	089.0000	0463.8	083.3	299.7	100.0000	0464.2	255.8	28.3
203.0	089.0000	0470.5	083.7	299.6	100.0000	0464.2	257.2	28.1
204.0	089.0000	0476.9	084.1	299.5	100.0000	0470.3	258.6	27.9

09-29-2008 30 Sec. Terrain Data

KBKL.C BPH20070723AEK  
Channel = 300C  
Max ERP = 100 kW  
RCAMSL = 2399.3 M  
N. Lat = 39 03 56  
W. Lng = 108 44 52

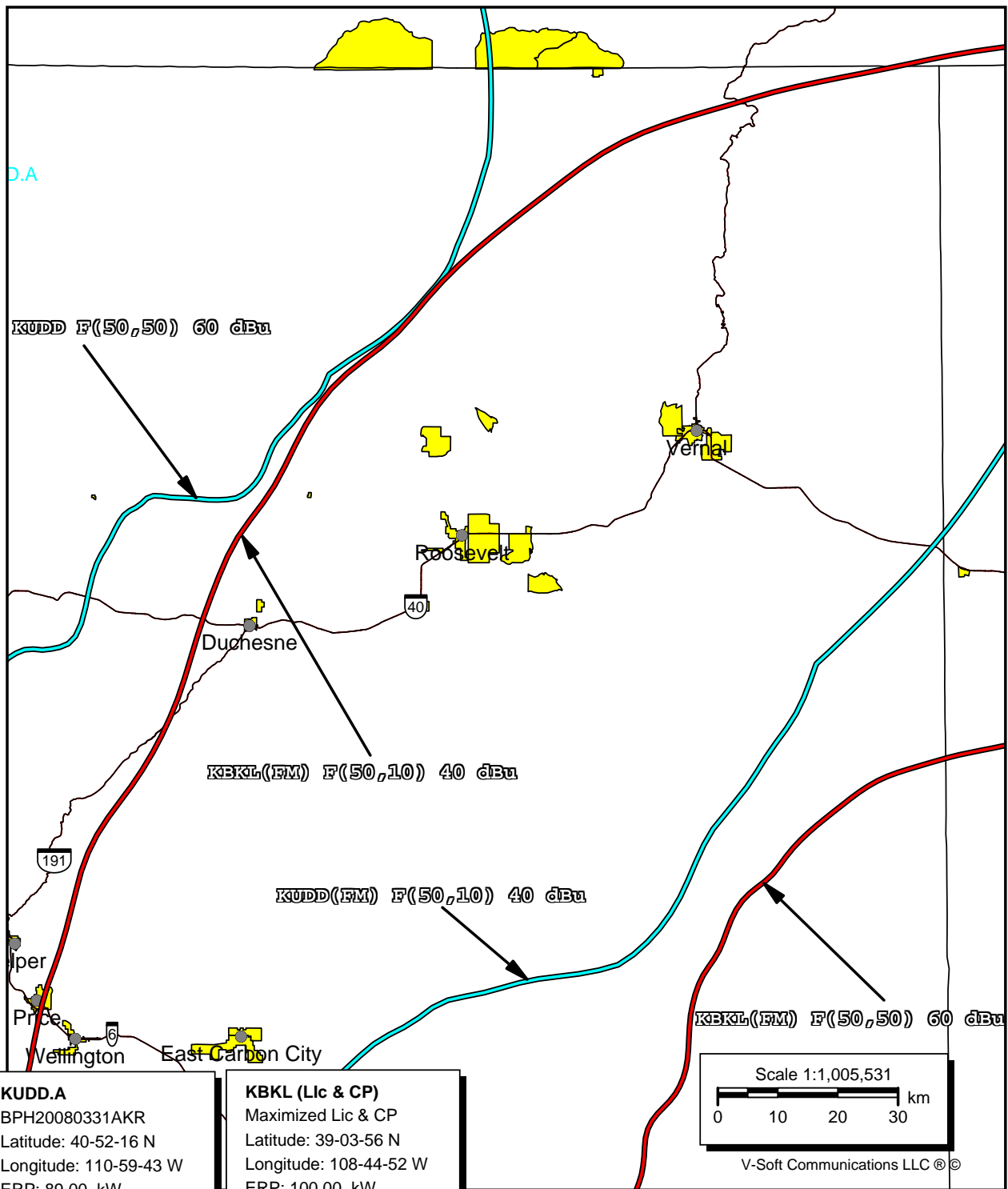
KUDD.A  
Channel = 300C  
Max ERP = 89 kW  
RCAMSL = 3330 M  
N. Lat = 405216.0  
W. Lng = 1105943.0

Protected  
60 dBu

Interfering  
40 dBu

Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Azi muth (degrees)	ERP (kW)	HAAT (m)	Di st (km)	Actual (dBu)
266.0	100.0000	0412.8	080.7	151.3	089.0000	0244.7	234.4	27.6
267.0	100.0000	0411.6	080.6	151.1	089.0000	0244.7	233.1	27.8
268.0	100.0000	0413.5	080.8	151.0	089.0000	0244.7	231.8	28.1
269.0	100.0000	0415.3	080.9	150.8	089.0000	0244.7	230.5	28.3
270.0	100.0000	0417.1	081.0	150.7	089.0000	0244.7	229.2	28.5
271.0	100.0000	0420.2	081.2	150.6	089.0000	0244.7	227.8	28.8
272.0	100.0000	0425.6	081.6	150.5	089.0000	0240.9	226.4	29.0
273.0	100.0000	0431.2	082.1	150.4	089.0000	0240.9	224.9	29.2
274.0	100.0000	0436.5	082.4	150.3	089.0000	0240.9	223.5	29.4
275.0	100.0000	0433.6	082.2	150.0	089.0000	0240.9	222.4	29.6
276.0	100.0000	0429.8	082.0	149.8	089.0000	0240.9	221.4	29.8
277.0	100.0000	0427.3	081.8	149.5	089.0000	0240.9	220.4	30.0
278.0	100.0000	0427.0	081.8	149.3	089.0000	0242.9	219.2	30.2
279.0	100.0000	0429.7	082.0	149.1	089.0000	0242.9	218.0	30.4
280.0	100.0000	0431.9	082.1	148.9	089.0000	0242.9	216.8	30.6
281.0	100.0000	0432.5	082.2	148.6	089.0000	0242.9	215.7	30.7
282.0	100.0000	0429.8	082.0	148.4	089.0000	0252.6	214.7	31.1
283.0	100.0000	0427.7	081.8	148.1	089.0000	0252.6	213.8	31.2
284.0	100.0000	0427.4	081.8	147.8	089.0000	0252.6	212.8	31.4
285.0	100.0000	0428.4	081.9	147.5	089.0000	0252.6	211.8	31.5
286.0	100.0000	0430.3	082.0	147.3	089.0000	0264.5	210.7	31.9
287.0	100.0000	0434.0	082.3	147.0	089.0000	0264.5	209.5	32.1
288.0	100.0000	0437.7	082.5	146.8	089.0000	0264.5	208.4	32.3
289.0	100.0000	0441.3	082.8	146.5	089.0000	0264.5	207.3	32.5
290.0	100.0000	0443.0	082.9	146.2	089.0000	0274.7	206.3	32.8
291.0	100.0000	0442.8	082.9	145.9	089.0000	0274.7	205.5	33.0
292.0	100.0000	0444.0	083.0	145.6	089.0000	0274.7	204.6	33.1
293.0	100.0000	0448.2	083.3	145.3	089.0000	0285.2	203.5	33.5
294.0	100.0000	0454.3	083.7	145.0	089.0000	0285.2	202.3	33.7
295.0	100.0000	0461.8	084.3	144.7	089.0000	0285.2	201.1	33.9
296.0	100.0000	0469.6	084.8	144.4	089.0000	0298.0	199.9	34.4
297.0	100.0000	0473.8	085.1	144.1	089.0000	0298.0	199.0	34.5
298.0	100.0000	0474.1	085.1	143.7	089.0000	0298.0	198.3	34.7
299.0	100.0000	0470.3	084.9	143.3	089.0000	0312.3	197.9	35.0
300.0	100.0000	0464.2	084.4	142.9	089.0000	0312.3	197.6	35.0
301.0	100.0000	0459.0	084.1	142.4	089.0000	0325.5	197.4	35.4
302.0	100.0000	0456.5	083.9	142.0	089.0000	0325.5	197.0	35.4
303.0	100.0000	0457.2	084.0	141.6	089.0000	0325.5	196.5	35.5
304.0	100.0000	0461.0	084.2	141.2	089.0000	0337.4	195.7	35.9
305.0	100.0000	0467.8	084.7	140.9	089.0000	0337.4	194.9	36.1
306.0	100.0000	0478.2	085.4	140.5	089.0000	0337.4	193.8	36.3
307.0	100.0000	0492.5	086.3	140.1	089.0000	0347.5	192.5	36.7
308.0	100.0000	0509.4	087.3	139.8	088.5651	0347.5	191.2	36.9
309.0	100.0000	0527.5	088.4	139.4	087.8266	0354.5	189.8	37.3
310.0	100.0000	0545.0	089.4	139.0	087.0496	0354.5	188.5	37.5
311.0	100.0000	0562.2	090.2	138.6	086.2298	0354.5	187.4	37.7
312.0	100.0000	0579.7	091.0	138.1	085.3766	0358.3	186.4	37.9
313.0	100.0000	0596.8	091.7	137.6	084.4949	0358.3	185.6	38.0
314.0	100.0000	0610.0	092.2	137.2	083.5875	0360.0	185.0	38.1
315.0	100.0000	0618.1	092.5	136.7	082.6612	0360.0	184.6	38.2
316.0	100.0000	0625.0	092.8	136.2	081.7289	0359.4	184.3	38.2
317.0	100.0000	0636.7	093.2	135.7	080.7929	0359.4	183.8	38.2
318.0	100.0000	0655.2	093.9	135.2	079.8442	0356.7	183.1	38.2
319.0	100.0000	0677.9	094.8	134.6	078.8756	0356.7	182.3	38.3
320.0	100.0000	0700.2	095.7	134.1	077.8886	0352.2	181.6	38.3
321.0	100.0000	0718.7	096.4	133.5	076.8928	0352.2	181.0	38.3
322.0	100.0000	0731.3	096.9	133.0	075.9039	0347.7	180.8	38.2
323.0	100.0000	0737.0	097.1	132.4	074.9353	0344.6	180.8	38.1
324.0	100.0000	0738.2	097.2	131.9	073.9910	0344.6	181.1	38.0
325.0	100.0000	0739.1	097.2	131.4	073.0587	0344.2	181.4	37.9
326.0	100.0000	0745.1	097.4	130.8	072.1120	0344.2	181.6	37.8
327.0	100.0000	0758.7	098.0	130.3	071.1292	0347.8	181.5	37.8
328.0	100.0000	0775.1	098.6	129.7	069.7830	0347.8	181.4	37.8
329.0	100.0000	0790.0	099.2	129.1	068.1462	0354.6	181.4	37.8

330.0	100.0000	0802.5	099.7	128.5	066.5517	0354.6	181.5	37.7
331.0	100.0000	0813.1	100.1	128.0	064.9988	0362.1	181.8	37.7
332.0	100.0000	0822.6	100.4	127.4	063.4818	0368.4	182.1	37.6
333.0	100.0000	0831.8	100.8	126.9	061.9955	0368.4	182.5	37.5
334.0	100.0000	0841.2	101.1	126.3	060.5341	0374.8	183.0	37.4
335.0	100.0000	0851.5	101.5	125.8	059.0903	0374.8	183.5	37.2
336.0	100.0000	0862.8	101.9	125.2	057.6624	0384.3	184.0	37.2
337.0	100.0000	0874.4	102.3	124.7	056.2646	0384.3	184.5	36.9
338.0	100.0000	0884.4	102.6	124.2	054.9245	0395.6	185.2	36.9
339.0	100.0000	0891.0	102.9	123.7	053.6655	0395.6	186.0	36.6
340.0	100.0000	0894.2	103.0	123.2	052.4919	0405.8	187.0	36.5
341.0	100.0000	0894.4	103.0	122.8	051.3959	0405.8	188.1	36.3
342.0	100.0000	0893.0	102.9	122.3	050.3589	0412.9	189.2	36.1
343.0	100.0000	0891.3	102.9	121.9	049.3661	0412.9	190.4	35.8
344.0	100.0000	0890.4	102.8	121.5	048.3989	0412.9	191.6	35.5
345.0	100.0000	0890.5	102.8	121.1	047.4512	0418.0	192.8	35.3
346.0	100.0000	0890.8	102.9	120.7	046.5362	0418.0	194.0	34.9
347.0	100.0000	0890.2	102.8	120.4	045.6717	0422.8	195.3	34.7
348.0	100.0000	0888.9	102.8	120.0	044.8723	0422.8	196.7	34.4
349.0	100.0000	0887.9	102.8	119.6	045.2683	0422.8	198.0	34.1
350.0	100.0000	0887.8	102.8	119.3	045.6599	0427.3	199.4	34.0
351.0	100.0000	0888.9	102.8	119.0	046.0499	0427.3	200.7	33.8
352.0	100.0000	0891.1	102.9	118.6	046.4385	0427.3	202.1	33.6
353.0	100.0000	0894.7	103.0	118.3	046.8261	0431.9	203.5	33.4
354.0	100.0000	0898.5	103.1	118.0	047.2049	0431.9	204.9	33.2
355.0	100.0000	0901.9	103.2	117.7	047.5679	0431.9	206.3	32.9
356.0	100.0000	0904.8	103.3	117.4	047.9157	0437.4	207.8	32.8
357.0	100.0000	0908.2	103.4	117.1	048.2547	0437.4	209.3	32.5
358.0	100.0000	0912.4	103.5	116.8	048.5882	0437.4	210.8	32.3
359.0	100.0000	0915.4	103.6	116.5	048.9005	0437.4	212.3	32.0

**KUDD.A**

BPH20080331AKR  
Latitude: 40-52-16 N  
Longitude: 110-59-43 W  
ERP: 89.00 kW  
HAAT: 647.0 m  
Channel: 300 C  
Frequency: 107.9 MHz  
AMSL Height: 3330.0 m  
Elevation: 3283.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: None

**KBKL (Lic & CP)**

Maximized Lic & CP  
Latitude: 39-03-56 N  
Longitude: 108-44-52 W  
ERP: 100.00 kW  
HAAT: 600.0 m  
Channel: 300 C  
Frequency: 107.9 MHz  
AMSL Height: 2399.19 m  
Elevation: 2171.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

## **Exhibit 7**

### **Proposed Directional Pattern Azimuth Tabulations**

KUDD Envelope  
Pre-Rotation Antenna Pattern....

Azimuth (deg)	Effective 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	0.870
110.0	0.800
120.0	0.710
130.0	0.891
140.0	1.000
150.0	1.000
160.0	1.000
170.0	1.000
180.0	1.000
190.0	1.000
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

