

**ENGINEERING EXHIBIT FOR AN
APPLICATION FOR A MODIFICATION TO A
CONSTRUCTION PERMIT (BNPFT-20130328AOC)
FOR TRANSLATOR K243BS
FACILITY ID# 149104
RADIO MILLENNIUM, LLC
FORT BRAGG, CALIFORNIA**

CHANNEL 243 0.25 KW (H&V) 103 METERS HAAT

SEPTEMBER 15, 2013



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ENGINEERING STATEMENT

This engineering exhibit, of which this Statement is a part, was prepared in accordance with the Rules and Regulations of the Federal Communications Commission and pursuant to the provisions of Section III-B of FCC Form 349 on behalf of Radio Millennium, LLC (hereafter ("**Millennium**") in support of an application for authority to modify an existing FM Construction Permit (BNPFT-20130328AOC), K243BS, for operation on channel 243 (96.5 MHz) at Fort Bragg, CA. The purpose of this application is to change the Transmitter site location, output power and HAAT (height of 103 meters). This power/height combination is an allowable Class D facility permitted under the current rules and regulations.

Millennium proposes to operate from a site uniquely described by the geographic coordinates:

(NAD 27)

39° 26' 35" North Latitude
123° 43' 58" West Longitude

(NAD 83)

39° 26' 34.6" North Latitude
123° 44' 02" West Longitude

Notification to the FAA is not required since the tower is already existing and no increase in height is proposed

Engineering Figure 1 is a portion of the Noyo Hills, CA 7.5 minute USGS map that shows the exact location of the tower. A search was performed for the presence of any other AM or FM communications facilities located nearby and only the co-located KCJU on channel 210A was found.

Figure 2 is an aerial view of the site. The applicant is aware of the provisions of §74.1203 of the FCC's Rules and the requirement for satisfying all complaints of interference that are received.

The proposed translator will be co-located on KCJU tower and will comply with the provisions contained in §74.1237.



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A review of allotments and assignments on channel 243, on the three immediately upper adjacent, the three immediately lower adjacent channels and the two channels removed by 53 and 54 channels (296 & 297) shows that the site proposed satisfies the requirements of §74.1204. The results of the allocation study are as follow:

Radio Millennium Llc										DISPLAY	DATES
REFERENCE										DATA	09-13-13
39 26 35.0 N.										CLASS = D	
123 43 58.0 W.										Current Spacings to 3rd Adj.	SEARCH 09-15-13
----- Channel 243 - 96.5 MHz -----											
Call	Channel	Location				Azi	Dist	FCC	Margin		
Lat.	Lng.	Ant	Power			HAAT					

K243BS	CP -D 243D	Fort Bragg			CA	323.1	2.97	65.0	-62.0		
39 27 52.0	123 45 13.0	DC	0.005 kW		0 M						
Radio Millennium Llc										BNPFT20130328AOC	
K240AQ	LIC-D 240D	Mendocino			CA	169.3	19.33	7.0	12.3		
39 16 19.0	123 41 28.0	DC	0.250 kW				195 M				
California Radio Partners,										BLFT20040610AAN	
K241AH	LIC 241D	Laytonville			CA	25.3	30.83	7.0	23.8		
39 41 38.0	123 34 43.0	VN	0.010 kW				709 M				
Family Stations, Inc.										BLFT19980107TC	
K244AH	LIC 244D	Ukiah, Etc.			CA	107.9	41.91	14.0	27.9		
39 19 36.0	123 16 12.0	HN	0.039 kW				508 M				
Tom Van Hese										BLFT19841012TB	
K242AH	CP 243D	Clearlake			CA	117.5	94.14	65.0	29.1		
39 02 56.0	122 46 02.0	C	0.060 kW		0 M						
Bicoastal Media Licenses,										BPFT20130326BBY	
KYBU	LIC 245A	Covelo			CA	46.6	56.97	26.0	31.0		
39 47 39.0	123 14 56.0	CX	0.100 kW				-225 M				
Friends Of The Round Valle										BLH20111025ABK	
K240AU	LIC-D 240D	Ukiah			CA	108.1	41.71	7.0	34.7		
39 19 33.0	123 16 22.0	DCN	0.090 kW				512 M				
Joy Lovinger										BLFT19970303TC	
KFMI	LIC 242C	Eureka			CA	352.0	143.97	104.0	40.0		
40 43 36.0	123 58 18.0	CN	30.000 kW				482 M				
Bicoastal Media Licenses I										BLH5918	
KULV	LIC 246A	Ukiah			CA	121.4	66.47	26.0	40.5		
39 07 50.0	123 04 32.0	CX	0.130 kW				603 M				
Educational Media Foundati										BLEDT20030917AEI	
K242AD	CP -D 242D	Ukiah			CA	129.9	56.43	14.0	42.4		
39 07 00.0	123 13 53.0	DV	0.250 kW		0 M						
Bicoastal Media Licenses,										BPFT20130326BBS	
K242AD	APP-D 242D	Ukiah			CA	129.9	56.43	14.0	42.4		
39 07 00.0	123 13 53.0	DV	0.250 kW		0 M						
Bicoastal Media Licenses,										BMPFT20130822AFW	



COVERAGE CONTOURS

The three-to-sixteen-kilometer average terrain elevations were derived from the NGDC 30-second terrain database.

DISTANCES TO CONTOURS (Kilometers):

Antenna COR elevation (AMSL): 221 meters Average HAAT: 102 meters

Frequency: 96.5000 MHz

Coordinates: N 39° 26' 35" W 123° 43' 58"

F(50,50) Curves Number of Contours: 1

AZ (degs)	HAAT (m)	ERPd (kW)	CONTOUR LEVELS (dBuV): 60.0
0.0	92	0.2500	12.5
30.0	19	0.2500	7.1
60.0	30	0.2500	7.1
90.0	7	0.2500	7.1
120.0	-15	0.2500	7.1
150.0	64	0.2500	10.4
180.0	72	0.2500	11.1
210.0	147	0.2500	15.8
240.0	201	0.2500	18.6
270.0	212	0.2500	19.1
300.0	209	0.2500	19.0
330.0	185	0.2500	17.9

The effective antenna radiation center height for each of the twelve standard 30-degree spaced radials was used in conjunction with the F (50, 50) metric curves of Figure 1 of §73.333 of the Rules to determine the distances to the 60 dBuV coverage contour. The contours drawn from the data are depicted on the map included as Engineering Figure 3.

Figure 4 shows the 54 dBuV F(50,50) contours of KMKX and the 60 dBuV of the proposal. This shows that the proposed signal overlaps the KMKX contour. However, all of the overlap is over water and complies with §74.1204 (d).

ANSI Power Density Calculations

The proposed antenna will be energized such that it produces an effective radiated power of 0.25 kW from a center of radiation 14 meters above ground level. The co-located KJCU operates with an output power of .13 kW at an antenna height of 21 meters above ground level. The combined RF level produces a total level of 10% of the



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uncontrolled Public Area. Using the OET-65 model program the maximum RF Radiation level assuming an uncontrolled area would be 10% of the maximum limit value.

Based on the calculations it was determined that the RF radiation would be only 43.25% of the uncontrolled limit. Measurements will be performed after construction to demonstrate compliance with the radiation standard. Hence, the conditions of §1.1306(b)(3) would not be involved.

The proposal is in complete conformance with all technical rules of the Federal Communications Commission.

Garrett G. Lysiak, P.E.
September 15, 2013

(INGLENOOK)

124° 00' 53.08" W
039° 45' 40.88" N

(DUTCHMANS KNOLL)

(DUTCHMANS
KNOLL)

123° 25' 56.01" W
039° 45' 40.88" N

(FORT BRAGG)

(NOYO HILL)

(MENDOCINO)

(MATHISON
PEAK)

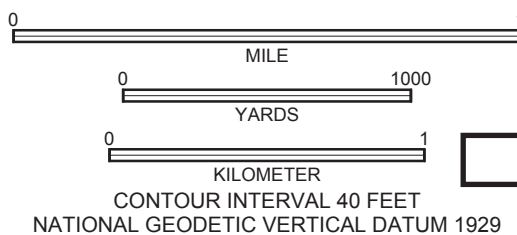
039° 07' 26.56" N
124° 00' 53.08" W

039° 07' 26.56" N
123° 25' 56.01" W

Declination

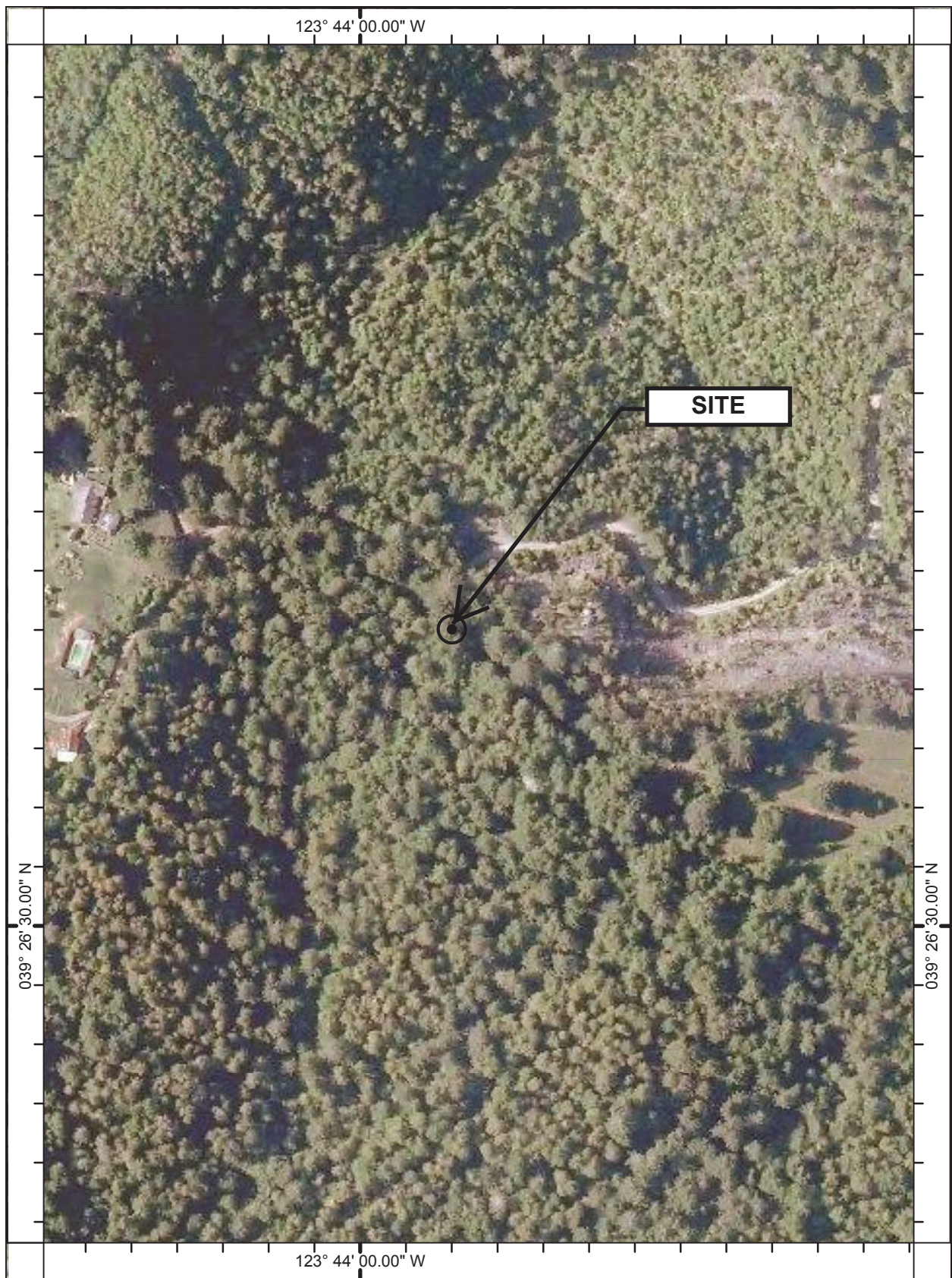
GN MN
GN 0.46° W
MN 14.60° E

(MATHISON PEAK)
SCALE 1:24000



NOYO HILL, CA
1991

FIGURE 1 - SITE MAP



SCALE 1:3000

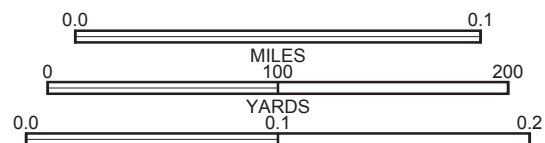
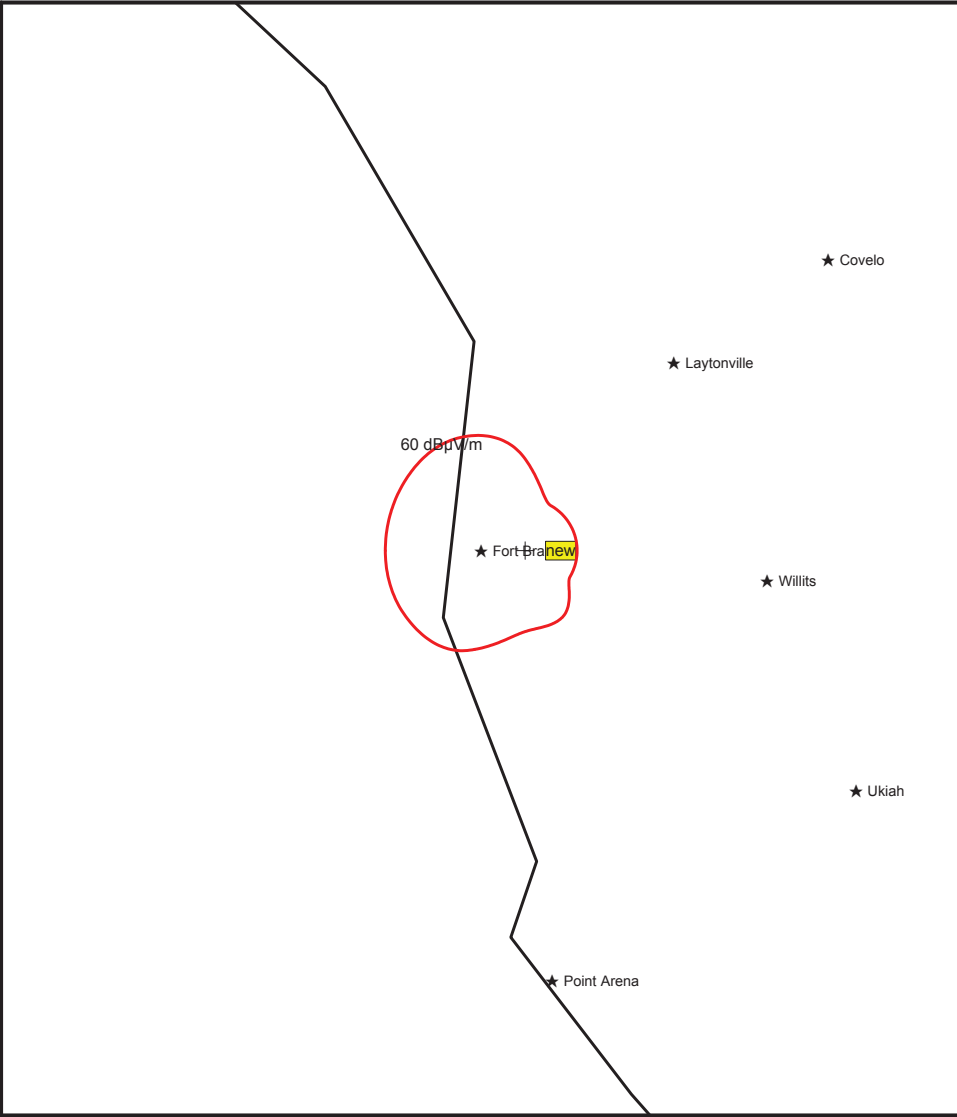


FIGURE 2 - AERIAL VIEW



Prop. model: FCC-EDX
Time: 50.0% Loc.: 50.0%
Prediction Confidence Margin: 0.0dB
Climate: Continental Temperate
Land use (clutter): none
Atmospheric Abs.: none
K Factor: 1.333
RX Antenna - Type: OMNI
Height: 2.0 m AGL Gain: -2.15 dBd

Field strength at remote
■ = 60.0 dBµV/m
Display threshold level: -120.0 dBmW
Sites
Site: new
N39°26'35.00" W123°43'58.00" 207.0 m
new Tx.Ht.AGL: 14.0 m Total ERPd: 0.25kW
Grp: 1 omni-horizontal/0.0° 96.5000 MHz



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SIGNAL COVERAGE
FIGURE 3 SEPTEMBER 15, 2013

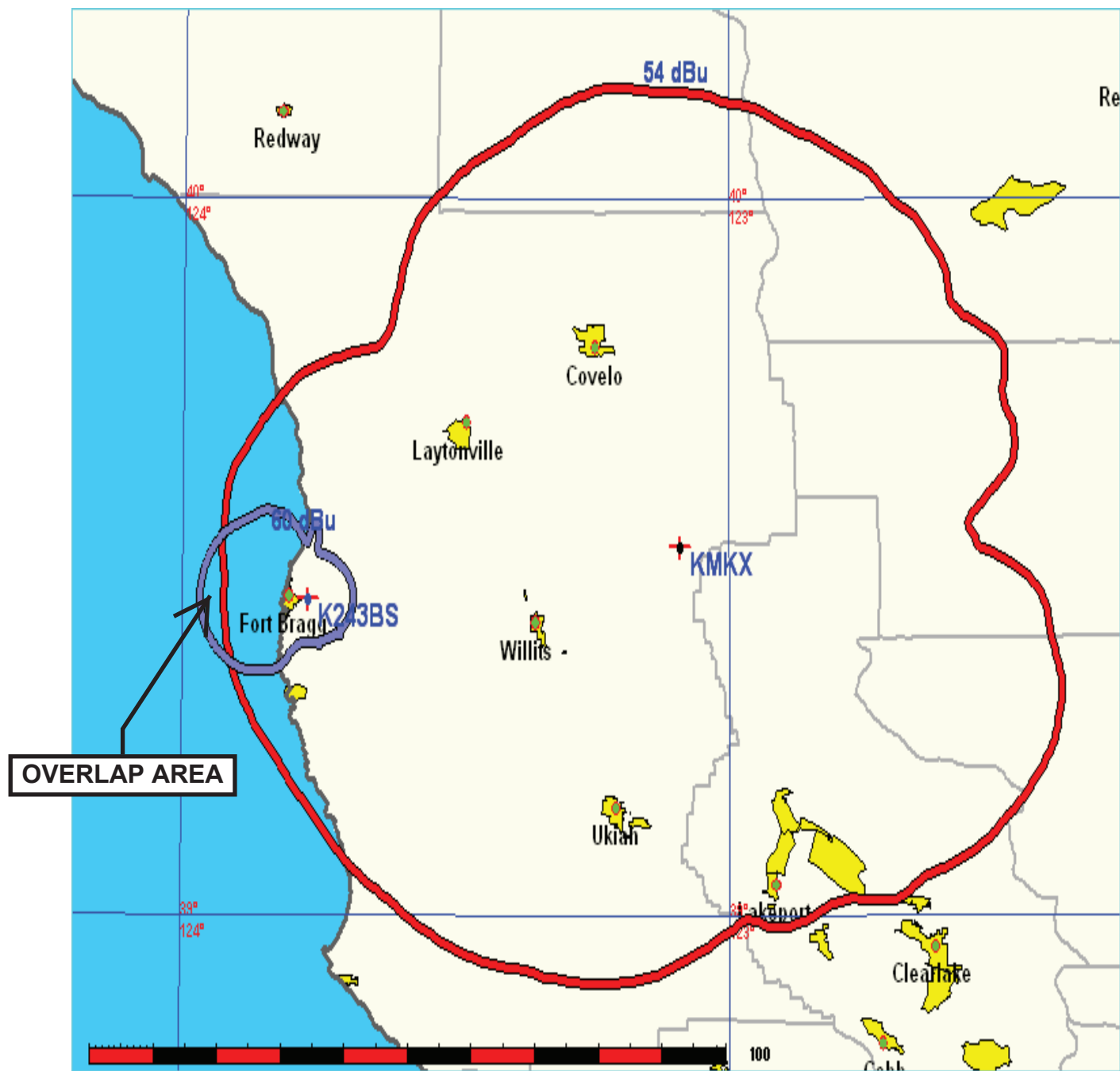


FIGURE 4 - OVERLAP AREA