

# Educational Media Foundation

5700 West Oaks Boulevard ♦ Rocklin ♦ California ♦ 95765

Exhibit 13

Hutchinson, KS

## Channel Study

REFERENCE		CH# 230D - 93.9 MHz, Pwr= 0.02 kW, HAAT= 51.8 M, COR= 527 M								DISPLAY DATES	
38 03 21.0 N.		Average Protected F(50-50)= 5.0 km								DATA 10-17-14	
97 57 54.0 W.		Omni-directional								SEARCH 10-17-14	
CH	CALL	TYPE	ANT	AZI.	DIST	LAT.	Pwr(kW)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG.	HAAT(M)	COR(M)	LICENSEE	(Overlap	in km)
230C3 KDGS		LIC	CN	131.3	73.74	37 36 60.0	25.000	113.3	38.7	-45.3*	16.1
Andover			KS	311.7	BLH19931108KC	97 20 11.0	100	497	Entercom License, Llc		
232C2 KCVW		LIC	CX	176.8	28.34	37 48 03.0	50.000	5.9	51.9	17.2	-23.9*
Kingman			KS	356.8	BMLD20030319ADA	97 56 49.0	150	610	Community Broadcasting, In		
232C1 KCVW		CP	ZCX	128.3	50.47	37 46 25.0	94.000	10.0	72.0	34.7	-21.9*
Kingman			KS	308.6	BPED20111214ABT	97 30 53.8	307	728	Community Broadcasting, In		
228D K228DW		LIC	C	0.0	0.00	38 03 21.0	0.055	0.5	4.9	-4.3*	-5.2*
Hutchinson			KS	0.0	BLFT20061010ADZ	97 57 54.0	52	527	Educational Media Foundati		
229C1 KYEZ		LIC	CN	17.2	104.43	38 57 14.0	100.000	90.1	60.3	9.8	37.8
Salina			KS	197.4	BLH6686	97 36 29.0	155	538	Mcc Radio, Llc		
230C1 KZRD		LIC	CN	266.9	207.07	37 55 56.0	100.000	169.6	70.3	32.9	122.2
Dodge City			KS	85.5	BLH19971203KB	100 19 02.0	246	1066	Rocking M Radio, Inc.		
228C3 KDGS		CP	NCX	121.0	73.69	37 42 47.0	15.000	3.9	38.1	64.1	35.3
Andover			KS	301.4	BPH20140421ADG	97 14 51.0	114	528	Entercom License, Llc		
228D K228DY		LIC	C	92.7	57.15	38 01 47.0	0.250	1.1	11.3	50.5	45.6
Newton			KS	273.1	BLFT20041227ABJ	97 18 53.0	68	508	Bible Broadcasting Networ		

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= West Zone, Co to 3rd adjacent.  
All separation margins (if shown) include rounding  
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.

**Compliance with C.F.R. 74.1204**

The proposed FM Translator is located within the protected 60 dBu contour of second adjacent channel station KCVW, channel 232C2 (and the CP for channel 232C1), Lyons, KS. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu. Since the distance of the interfering contour of the proposed facility is greater when considering the CP on 232C1, the calculations for that facility will be used in this study.

The proposed ERP for K228DW.P:	20 watts
The proposed COR for K228DW.P:	58 meters
KCVW.CP F(50/50) contour at proposed site:	69.7 dBu
The F(50/10) contour of proposed K228DW.P	109.7 dBu

As can be seen in Exhibit 13–A1, the signal is predicted to not reach the ground. Also, Exhibit 13-A2 is a aerial photo showing that there are no regularly occupied structures close enough to enter the interference aperture.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1  
74.1204(d) Showing  
K228DW.P  
Hutchinson, KS

ERP (kw): 0.02  
Height of Antenna above Ground (m): 58  
Translator's IX Contour: 109.7  
Antenna Type: RFS CPF-500

<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1.000	0.0200	102.6869	58.000
5	0.997	0.0199	102.3275	49.082
10	0.986	0.0194	101.2493	40.418
15	0.969	0.0188	99.4625	32.257
20	0.945	0.0178	96.9980	24.825
25	0.914	0.0167	93.8764	18.326
30	0.878	0.0154	90.1488	12.926
35	0.836	0.0140	85.8565	8.755
40	0.789	0.0125	81.0508	5.902
45	0.738	0.0109	75.7932	4.406
50	0.683	0.0093	70.1454	4.265
55	0.625	0.0078	64.1793	5.427
60	0.565	0.0064	57.9667	7.799
65	0.502	0.0050	51.5796	11.253
70	0.439	0.0039	45.1001	15.620
75	0.376	0.0028	38.5897	20.725
80	0.313	0.0020	32.1307	26.357
85	0.251	0.0013	25.7949	32.303
90	0.191	0.0007	19.6440	38.356



Google earth

