Educational Media Foundation
5700 West Oaks Boulevard
Rocklin, CA 95765

Channel Study

REFERENCE — CH# 249D - 97.7 MHz, Pwr= 0.21 kW, HAAT= 311.9 M, COR= 590 M — DISPLAY DATES
45 20 20.0 N. — Average Protected F(50-50)= 22.1 km — DATA 03-22-13
93 23 27.0 W. — Omni-directional — SEARCH 03-22-13

CH / CITY	CALL / STATE	TYPE	ANT	AZI. <--	DIST / FILE #	LAT. / LNG.	Pwr(kW) / HAAT(M)	INT(km) / COR(M)	PRO(km) / LICENSEE	*IN* (Overlap in km)	*OUT* (Overlap in km)
249D	K249ED	LIC	C	186.3	23.73	45 07 36.0	0.170	28.0	8.3	-26.7*	-52.9
Albertville	MN			6.2	BLFT20071025AED	93 25 26.0	41	316	Educational Media Foundati		
246C	KTCZ-FM	LIC	CN	146.1	37.54	45 03 30.0	100.000	10.4	73.6	4.9	-37.0*
Minneapolis	MN			326.3	BLH19910814KC	93 07 27.0	315	593	Amfm Broadcasting Licenses		
251C0	WWJO	LIC	CY	317.1	72.44	45 48 52.0	100.000	10.1	72.4	41.1	-0.5
St. Cloud	MN			136.6	BLH19890117KF	94 01 38.0	305	669	Townsquare Media Licensee		
249C3	WAQE-FM	LIC	NC	79.5	128.83	45 32 16.0	15.500	99.4	31.4	7.2	29.0
Barron	WI			260.7	BLH20010412AAH	91 45 50.0	88	455	Tkc, Inc.		
248C	KNXR	LIC	C	149.7	166.47	44 02 28.0	100.000	107.0	73.7	37.3	59.3
Rochester	MN			330.4	BLH19990505KB	92 20 25.0	317	671	United Audio Corporation		
248D	W248AS	LIC	C	24.7	82.74	46 00 51.0	0.055	9.9	6.9	50.7	42.9
Hinckley	MN			205.0	BLFT20061127ADB	92 56 35.0	46	360	Minnesota Public Radio		

Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings orFCC minimum spacings in KM, M= Margin in KM
In & Outdistances between contours are shown at closest points. Reference Zone=East 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.

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Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 60 dBu contour of third adjacent channel station KTCZ-FM, channel 246C, Minneapolis, MN. 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.

The proposed ERP for K249ED:	210 watts
The proposed COR for K249ED:	311 meters
KTCZ-FM F(50/50) contour at proposed site:	76.9 dBu
The F(50/10) contour of proposed K249ED	116.9 dBu

By taking into account the antenna vertical elevation pattern for a half wave spaced Jampro, JLCP, it has been determined that the predicted interfering contour will not actually reach the ground (see Exhibit 13 A-1). The maximum distance to the interference contour is 145.3 meters. Please see Exhibit 13 A-2 for an aerial photo of the area that shows there are no buildings tall enough to enter the predicted interference area.

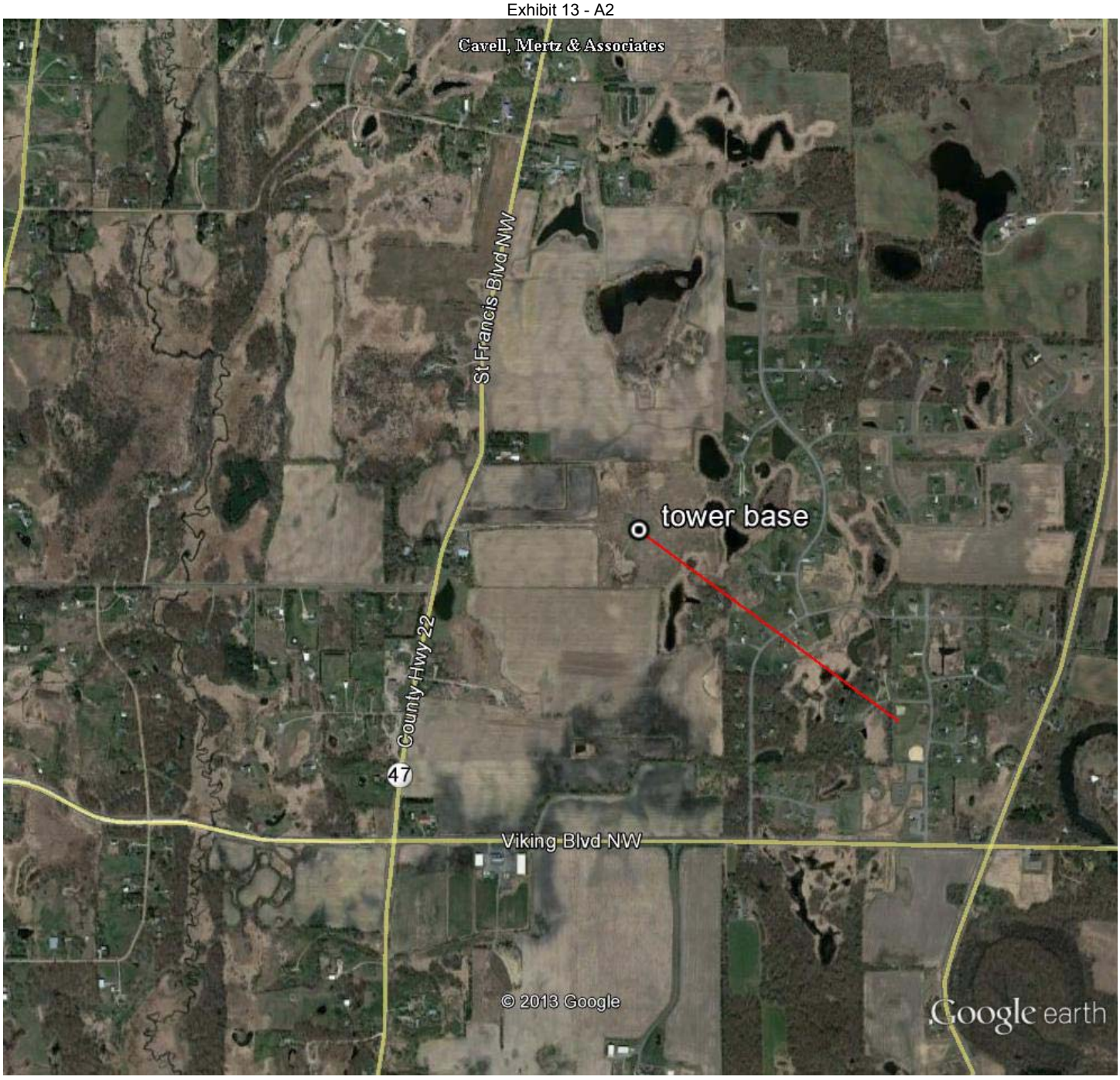
Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1
74.1204(d) Showing
K249ED
ALBERTVILLE, MN

ERP (kw): 0.21
Height of Antenna above Ground (m): 311
Translator's IX Contour: 116.9
Antenna Type: Jampro JLCP-2H

Depression Angle from Horizon	Antenna Relative Field	ERP (kw) from the Antenna RF	Dist. To IX Contour (m)	Height IX Contour Above Ground (m)
0	1.000	0.2100	145.2478	311.000
5	0.984	0.2033	142.9239	298.543
10	0.939	0.1852	136.3877	287.317
15	0.863	0.1564	125.3489	278.557
20	0.782	0.1284	113.5838	272.152
25	0.693	0.1009	100.6567	268.461
30	0.594	0.0741	86.2772	267.861
35	0.478	0.0480	69.4285	271.177
40	0.378	0.0300	54.9037	275.709
45	0.289	0.0175	41.9766	281.318
50	0.216	0.0098	31.3735	286.966
55	0.146	0.0045	21.2062	293.629
60	0.094	0.0019	13.6533	299.176
65	0.056	0.0007	8.1339	303.628
70	0.030	0.0002	4.3574	306.905
75	0.013	0.0000	1.8882	309.176
80	0.004	0.0000	0.5810	310.428
85	0.001	0.0000	0.1452	310.855
90	0.001	0.0000	0.1452	310.855

Exhibit 13 - A2



Google earth

miles 1
km 1

NAD27 COORDINATES
45 20 20 N
093 23 27 W
THE RED LINE MEASURE IS 1017M FROM THE TOWER BASE.

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Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 60 dBu contour of second adjacent channel station WWJO, channel 246C, St. Cloud, MN. 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.

The proposed ERP for K249ED:	210 watts
The proposed COR for K249ED:	311 meters
WWJO F(50/50) contour at proposed site:	60 dBu
The F(50/10) contour of proposed K249ED	100 dBu

By taking into account the antenna vertical elevation pattern for a half wave spaced Jampro, JLCP, it has been determined that the predicted interfering contour will not actually reach the ground (see Exhibit 13 B-1). The maximum distance to the interference contour is 1017 meters. Please see Exhibit 13 A-2 for an aerial photo of the area that shows there are no buildings tall enough to enter the predicted interference area.

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

EXHIBIT 13 - B1
74.1204(d) Showing
K249ED
ALBERTVILLE, MN

ERP (kw): 0.21
Height of Antenna above Ground (m): 311
Translator's IX Contour: 100
Antenna Type: Jampro JLCP-2H

Depression Angle from Horizon	Antenna Relative Field	ERP (kw) from the Antenna RF	Dist. To IX Contour (m)	Height IX Contour Above Ground (m)
0	1.000	0.2100	1016.5053	311.000
5	0.984	0.2033	1000.2412	223.823
10	0.939	0.1852	954.4985	145.253
15	0.863	0.1564	877.2441	83.953
20	0.782	0.1284	794.9071	39.126
25	0.693	0.1009	704.4382	13.292
30	0.594	0.0741	603.8041	9.098
35	0.478	0.0480	485.8895	32.305
40	0.378	0.0300	384.2390	64.016
45	0.289	0.0175	293.7700	103.273
50	0.216	0.0098	219.5651	142.803
55	0.146	0.0045	148.4098	189.430
60	0.094	0.0019	95.5515	228.250
65	0.056	0.0007	56.9243	259.409
70	0.030	0.0002	30.4952	282.344
75	0.013	0.0000	13.2146	298.236
80	0.004	0.0000	4.0660	306.996
85	0.001	0.0000	1.0165	309.987
90	0.001	0.0000	1.0165	309.983