

Channel Study

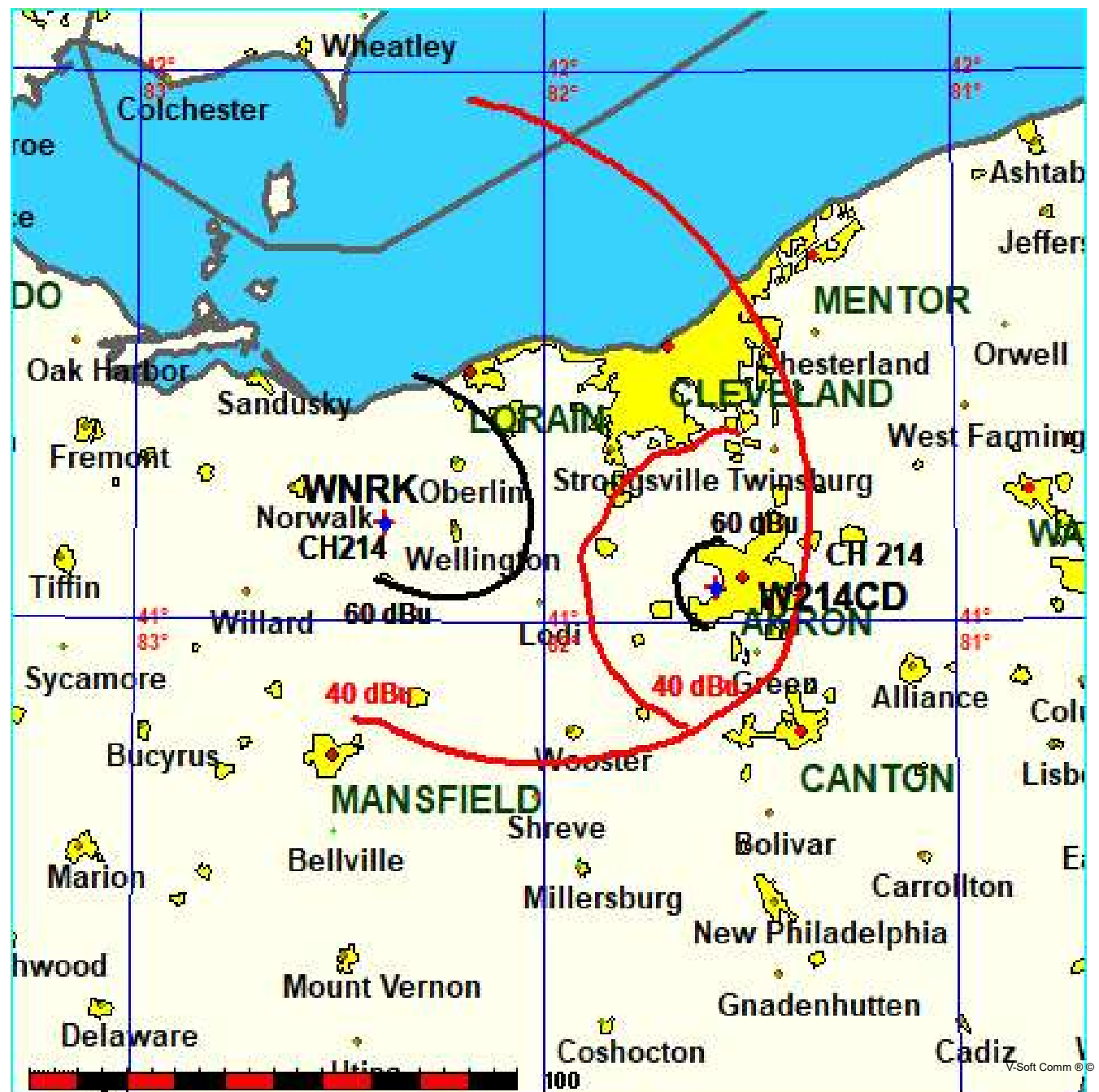
REFERENCE		CH# 214D - 90.7 MHz, Pwr= 0.01 kW, HAAT= 207.0 M, COR= 525 M								DISPLAY DATES	
41 03 53.0 N.		Average Protected F(50-50)= 8.4 km								DATA 08-26-19	
81 34 59.0 W.		Omni-directional								SEARCH 09-03-19	
CH CITY	CALL	TYPE STATE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
214D Wadsworth	W214CD!	LIC	C OH	0.0 0.0	0.00 BLFT20120306AAQ	41 03 53.0 81 34 59.0	0.010 207	525	---Reference---		
214A Norwalk	WNRK	LIC	DCX OH	281.1 100.5	68.90 BLED20040608ABM	41 10 50.0 82 23 21.0	4.000 124	86.0 399	29.4 Kent State University	-25.4*<	11.6
217A Akron	WAPS	LIC	DEX OH	0.0 0.0	0.00 BLED20080702ADM	41 03 53.0 81 34 59.0	2.000 106	1.6 424	19.3 Board Of Education, Akron	-10.9*<	-19.6*<
214B1 Struthers	WKTL	LIC	DCN OH	90.7 271.3	82.74 BLED1805	41 03 06.0 80 35 56.0	13.500 7	86.7 339	19.6 Board Of Education Struthe	-12.3*<	35.4
217A Akron	WAPS	AXL	CX OH	102.8 282.8	4.88 BXMLED20021210AAB	41 03 18.0 81 31 35.0	0.690 46	1.6 364	12.4 Board Of Education, Akron	-4.8*<	-7.7*<
212B Cleveland	WCPN	LIC	DCN OH	342.3 162.3	35.79 BLED19961025KA	41 22 18.0 81 42 48.0	47.000 155	3.5 425	33.7 Ideastream	23.8	1.9
215A Wooster	WCWS-FM	LIC	C OH	222.6 42.4	35.73 BMLEDD20000505AAF	40 49 41.0 81 52 14.0	1.050 68	22.9 393	15.3 The College Of Wooster	4.7	8.9
06Z-- Cleveland	WLFM-LP«	LI	N OH	344.3 164.3	36.69 BLTVL-20120613AAZ	41 22 57.8 81 42 06.5	3.000 -999	2.5 505	25.4	28.0R	8.7M
213B1 Millersburg	WVML	LIC	DCX OH	194.6 14.5	53.08 BLED20130403AAD	40 36 08.0 81 44 32.0	15.000 112	34.2 450	22.8 The Moody Bible Institute	10.2	18.0
216A Alliance	WRMU-FM	LIC	HN OH	114.1 294.4	43.41 BMLEDD19810611AA	40 54 16.0 81 06 45.0	2.800 58	1.9 411	19.1 Mount Union College	33.3	24.1
214A Mansfield	WVMC-FM	LIC	DC OH	244.8 64.2	88.47 BLED20140207AAX	40 43 21.0 82 31 52.0	1.550 75	51.9 459	15.3 Mansfield Christian School	28.5	46.3
06Z-- Cleveland	WLFM-LP«	STA	HN OH	344.3 164.3	36.69 0000068414	41 22 57.8 81 42 06.5	0.003 -999	2.5 505	4.4	7.0R	29.7M
06 1E Cambridge	WOUC-TV«	LI	DEN OH	166.9 347.1	110.84 0000068363	40 05 31.8 81 17 18.6	7.110 338	2.5 655	76.4	79.0R	31.9M
215A Carrollton	WJDD	LIC	HX OH	148.2 328.4	64.53 BLED20110606AAS	40 34 15.0 81 10 48.0	0.270 97	19.7 432	13.2 Denny And Marge Hazen Mini	36.4	39.5
211A Bolivar	WJEE	LIC	DHX OH	156.7 336.9	49.20 BLED20111202AFP	40 39 28.0 81 21 08.0	2.300 -10	1.6 309	12.4 Denny And Marge Hazen Mini	39.0	36.6
216B1 Cleveland	WRUW-FM	LIC	DC OH	359.9 179.9	50.62 BLED20010406AAQ	41 31 14.0 81 35 03.0	15.000 89	1.6 320	13.0 Case Western Reserve Unive	39.7	37.4
215B1 Jefferson	WCVJ	LIC	C OH	47.2 227.8	93.24 BMLEDD20140924AAL	41 37 50.0 80 45 36.0	1.850 196	46.9 485	31.1 Educational Media Foundati	37.6	49.9
6 -- Cambridge	WOUC-TV-A«	CHA	D Y OH	167.0 347.1	110.83 DTVBL50141	40 05 32.0 81 17 19.0	1.720 385	2.5 699	63.5	66.1R	44.8M

Terrain database is FCC 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= East Zone, Co to 3rd adjacent.
 All separation margins (if shown) include rounding. Call signs with exclamation marks need not be protected.
 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 restricted contour.
 < = Contour Overlap

FMCommander Single Allocation Study - 09-03-2019 - FCC NGDC 30 Sec
W214CD's Overlaps (In= -25.4 km, Out= 11.57 km)

W214CD CH 214 D
Lat= 41 03 53.0, Lng= 81 34 59.0
0.01 kW 207 m HAAT, 525 m COR
Prot.= 60 dBu, Intef.= 40 dBu

WNRK CH 214 A DA BLED20040608ABM
Lat= 41 10 50.0, Lng= 82 23 21.0
4.0 kW 124 m HAAT, 399 m COR
Prot.= 60 dBu, Intef.= 40 dBu



FMCommander Single Allocation Study - 09-03-2019 - FCC NGDC 30 Sec
W214CD's Overlaps (In= -12.26 km, Out= 35.37 km)

W214CD CH 214 D

Lat= 41 03 53.0, Lng= 81 34 59.0

0.01 kW 207 m HAAT, 525 m COR

Prot.= 60 dBu, Intef.= 40 dBu

WKTL CH 214 B1 DA BLED1805

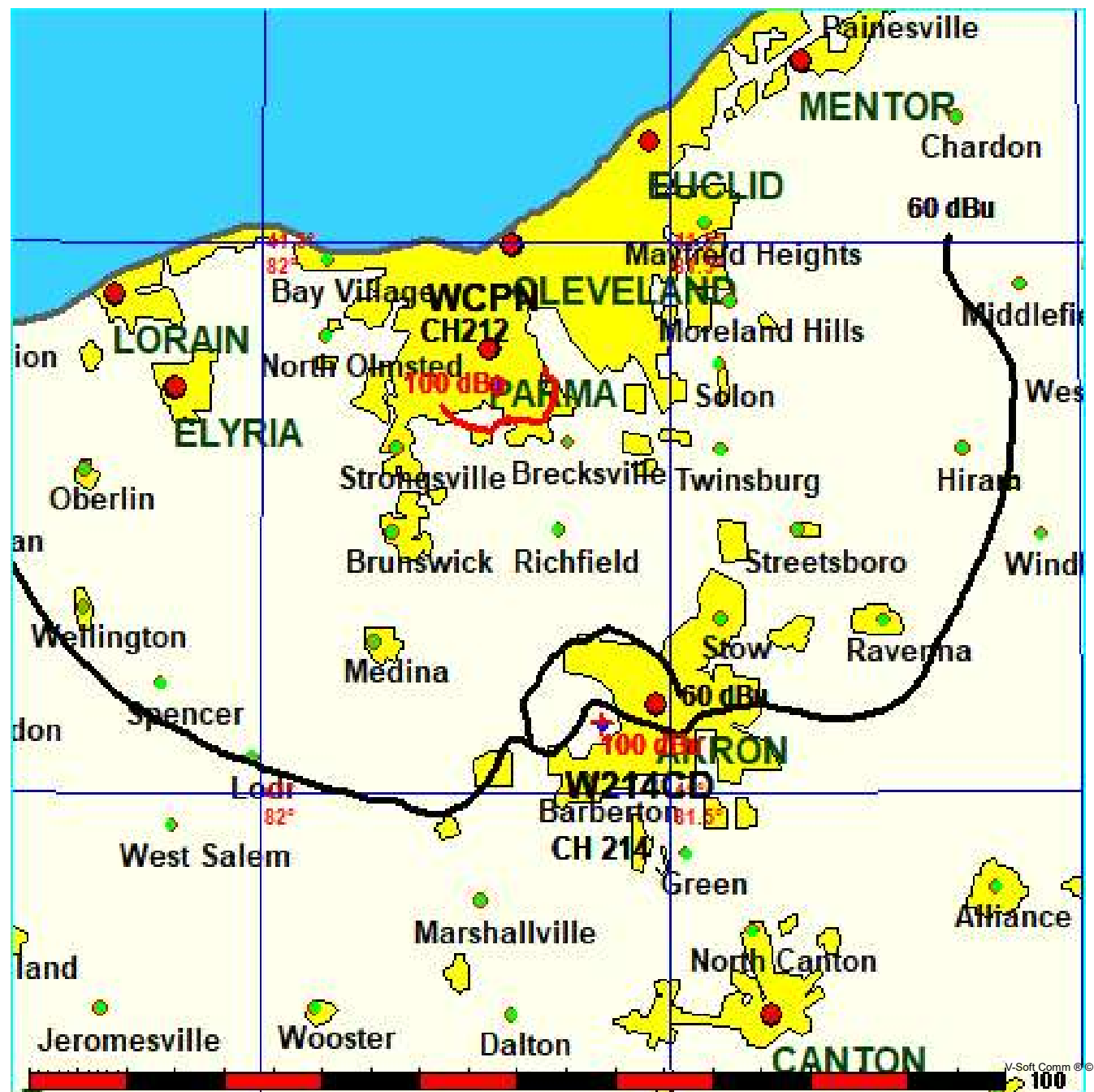
Lat= 41 03 06.0, Lng= 80 35 56.0

13.5 kW 7 m HAAT, 339 m COR

Prot.= 60 dBu, Intef.= 40 dBu



WCPN CH 212 B DA BLED19961025KA
Lat= 41 22 18.0, Lng= 81 42 48.0
47.0 kW 155 m HAAT, 425 m COR
Prot.= 60 dBu, Intef.= 100 dBu



FMCommander Single Allocation Study - 09-03-2019 - FCC NGDC 30 Sec
W214CD's Overlaps (In= 4.73 km, Out= 8.93 km)

W214CD CH 214 D

Lat= 41 03 53.0, Lng= 81 34 59.0

0.01 kW 207 m HAAT, 525 m COR

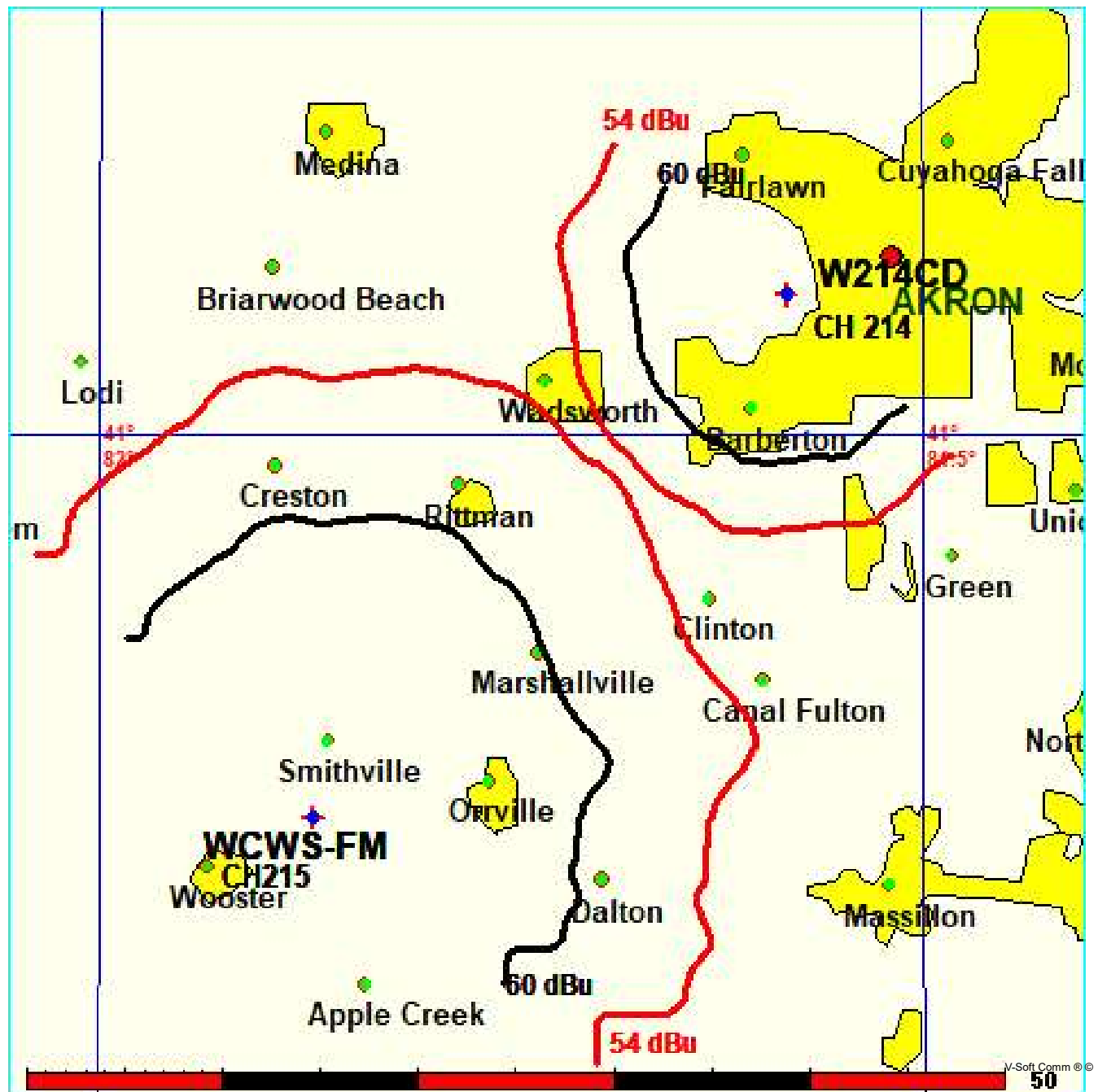
Prot.= 60 dBu, Intef.= 54 dBu

WCWS-FM CH 215 A BMLED20000505AAF

Lat= 40 49 41.0, Lng= 81 52 14.0

1.05 kW 68 m HAAT, 393 m COR

Prot.= 60 dBu, Intef.= 54 dBu



Educational Media Foundation

5700 W Oaks Blvd
Rocklin, CA 95765

*Exhibit 13-A
Wadsworth, OH*

Compliance with C.F.R. 74.1204

The proposed FM Translator will be co-located with third adjacent station WAPS, channel 217A, Akron, OH, with a vertical separation of 101m. Using the free space calculation and a power of 2kw for WAPS, the resulting signal level at the proposed W214CD antenna is 129.8dbu. 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 W214CD.P:	10 watts
The proposed COR for W214CD.P:	193 meters
WAPS F(50/50) contour at proposed site:	129.8dBu
The F(50/10) contour of proposed W214CD.P:	169.8dBu

The predicted distance to the 169.8dbu interfering contour is 0.07 meters. Taking into account the vertical elevation pattern of the Nicom BKG77 single bay antenna and the height above ground of 193M, it has been determined that the interfering contour of 169.8dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 192.97m above ground.

As can be seen in Exhibit 13-A2 there are no surrounding structures which are tall enough or close enough to enter the 192.97m aperture within the 0.07 meter radius from the base of the tower.

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
W214CD
Wadsworth, OH


ERP (kw): 0.01
Height of Antenna Above Ground (m): 193
Translator's IX Contour: 169.8
Antenna Type: Nic BKG77-1

<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	0.0100	0.0718	193.000
5	0.999	0.0100	0.0717	192.994
10	0.982	0.0096	0.0705	192.988
15	0.954	0.0091	0.0685	192.982
20	0.918	0.0084	0.0659	192.977
25	0.872	0.0076	0.0626	192.974
30	0.818	0.0067	0.0587	192.971
35	0.758	0.0057	0.0544	192.969
40	0.691	0.0048	0.0496	192.968
45	0.616	0.0038	0.0442	192.969
50	0.538	0.0029	0.0386	192.970
55	0.465	0.0022	0.0334	192.973
60	0.391	0.0015	0.0281	192.976
65	0.313	0.0010	0.0225	192.980
70	0.239	0.0006	0.0172	192.984
75	0.176	0.0003	0.0126	192.988
80	0.129	0.0002	0.0093	192.991
85	0.103	0.0001	0.0074	192.993
90	0.104	0.0001	0.0075	192.993

W214CD Wadsworth, OH

Cavell, Mertz & Associates

Legend

 Line Measure

