

Exhibit 13 - FM Channel Study

Kilgore Broadcast Maintenance

Form 349 Long-Form											
Metro North Communications, Inc.											
CH# 230D - 93.9 MHz, Pwr= 0.25 kW DA, HAAT= 0.0 M, COR= 357 M											
Average Protected F(50-50)= 7.09 km											
Standard Directional											
DISPLAY DATES											
DATA 03-01-18											
SEARCH 03-06-18											
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)		
230D 1772685	APP DC_	0.0	0.00	44 04 22.6	0.250	0.00	0.00	64.5R	-64.5M	/1	
New Holstein	WI	0.0	BNPFT20170726ATQ	88 15 24.7	357	Metro North Communications					
230C1 WDOR-FM	LIC _CN	36.9	116.38	44 54 23.0	77.000	153.6	60.2	-50.0*<	12.1	/2	
Sturgeon Bay	WI	217.5	BLH19801224AK	87 22 15.0	198	396	Door County Broadcasting C				
232C3 WYDR	LIC ZCN	347.1	9.73	44 09 30.0	13.000	2.7	27.8	-3.5*<	-19.0*<	/3	
Neenah-menasha	WI	167.1	BLH19950920KB	88 17 03.0	140	387	Midwest Communications, In				
228C2 WGEE	LIC _CN	336.3	57.54	44 32 47.0	50.000	6.0	52.6	41.7	4.3		
New London	WI	156.1	BLH19890911KB	88 32 57.0	150	388	Midwest Communications, In				
230D 1772565	APP DC_	262.2	22.02	44 02 45.1	0.250	10.4	3.2	7.8	6.6		
Oshkosh	WI	82.0	BNPFT20170731ABC	88 31 44.8	320	Cumulus Licensing Lic					
229A WBFM	LIC _CN	133.0	57.44	43 43 12.0	6.000	33.2	22.2	13.0	19.2		
Sheboygan	WI	313.3	BLH19930225KB	87 44 04.0	77	277	Midwest Communications, In				
230C3 WMMA-FM	LIC NCX	278.1	126.92	44 13 23.0	18.000	105.4	35.7	17.8	79.1		
Nekoosa	WI	97.0	BLH20050525AIH	89 49 46.0	112	411	Immaculate Heart Media, In				
229D 1769726	APP _C_	204.6	36.68	43 46 22.0	0.250	11.3	7.9	17.9	18.1		
Fond Du Lac	WI	24.5	BNPFT20170801AHF	88 26 50.0	268	Radio Plus, Inc.					
283A WXR	LIC NCX	156.9	41.96	43 43 32.0	5.100	0.0	0.0	9.5R	32.5M		
Plymouth	WI	337.0	BLH20060109ACJ	88 03 07.0	108	401	Midwest Communications, In				
284A WBJZ	APP NCX	250.0	53.82	43 54 20.8	5.200	0.0	0.0	9.5R	44.3M		
Berlin	WI	69.5	BPH20180222AAY	88 53 11.7	100	360	Caxambas Corporation				
231B WJJ0	LIC _CX	210.2	130.11	43 03 32.0	50.000	78.4	65.3	44.9	51.3		
Watertown	WI	29.7	BMLH20160921AAN	89 03 45.0	150	416	Mid-west Management, Inc.				
284A WBJZ	LIC NCX	249.4	54.61	43 53 57.0	5.200	0.0	0.0	9.5R	45.1M		
Berlin	WI	69.0	BLH20060612AAK	88 53 37.0	107	369	Caxambas Corporation				
233B WKT1	LIC _C_	165.2	112.75	43 05 29.0	14.000	5.5	65.6	96.8	45.5		
Milwaukee	WI	345.4	BLH19991020ABM	87 54 07.0	291	498	Scripps Broadcasting Hol di				
227B WLDB	LIC NCX	165.2	112.20	43 05 46.0	16.000	5.5	64.6	96.2	46.0		
Milwaukee	WI	345.5	BLH20050923AAH	87 54 15.0	270	468	Milwaukee Radio Alliance,				

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.
 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

/1 This is the subject station of this instant application.

/2 Full-service stations are not required to protect FM translators.

/3 Please see UD/D Study and 74.1204 waiver request herein.

Protected zones report for 1772685 on channel 230D 03-06-2018

Lat. 44 04 22.6 Lng. 88 15 24.7, ERP= 0.25 kw, HAAT= 0 m

Facility is okay with respect to Canada. Distance = 393.3 km.

Facility is okay with respect to AM station towers.

Closest AM Facility is WLAK, NEW HOLSTEIN, WI, L, NDD at 89.0° at a distance of 6.2 km

Facility is okay with respect to FCC monitoring stations.

Closest FCC Monitoring Station is 247.8 km= Allegan, MI

Facility is okay toward West Virginia Quiet Zone. Distance to center = 969.3 km

Facility is okay toward Table Mountain. Distance to Center = 1471.3 km,

Azimuth = 258.5 Degrees True

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Waiver For Compliance with 47 C.F.R. 74.1204

Interference to WYDR

The site for the facility of proposed CP amendment is located within the protected contour of second-adjacent channel station WYDR, channel 232C3, in Neenah-Menasha, WI, the Protected Station. The predicted contour at the proposed site for this amendment is 78.5 dBu F[50,50]. According to established contour protection ratios, the contour from the interfering station should be 40 dB higher than the protected contour. Therefore the respective potential interfering contour for this proposed amendment is 118.5 dBu F[50,10].

An aerial view map shows the 118.5dBu interfering contour in red which encompasses the UD/D interference area. The ground elevation within that radius is approximately even with or below the site elevation within the potentially affected area. In that areas there are no residences, business buildings, storage buildings or other structures where the public might be located. The only public location within the potentially affected area is County Road E.

The antenna is proposed to be located with radiation center 48 meters AGL transmitting 0.250 KW ERP. Applicant proposes to use a BEXT Log-R-FM-DA2 composite antenna. A graphical representation of radiation in the vertical plane, the results from XField (© V-Soft), is displayed in a following page shows the interference hovers more than 20 meters AGL at the reference elevation.

Request for Waiver

No buildings, roads or other structures that the public would normally occupy would put the public within the interference pattern radiated by the antenna.

Since this proposal complies with 47 C.F.R. 74.1204(d) based upon the fact that no actual interference will occur due to no population and no public locations within the areas of interference, we hereby request waiver of 47 C.F.R. 74.1204(a)(3) for separation between this proposed facility and the Protected Station.

Exhibit 13 - WLAK Chilton Xltr vs WYDR

1762889.Prop 118.6dBu

Chilton, WI
Latitude: 44-04-22.60 N
Longitude: 088-15-24.70 W
ERP: 0.25 kW, Class D
Ch: 230, Freq: 93.9 MHz
Height: AMSL 357.1 m, AGL 51.93 m
Site Elev: 305.17 m, HAAT 0.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

- 1762889.Prop 118.6dBu (230)
- WYDR 78.60dBu (232)

Moore Rd

County Hwy E

1762889.Prop 118.6dBu



Scale 1:12,500

0 0.17 0.33 0.5 km

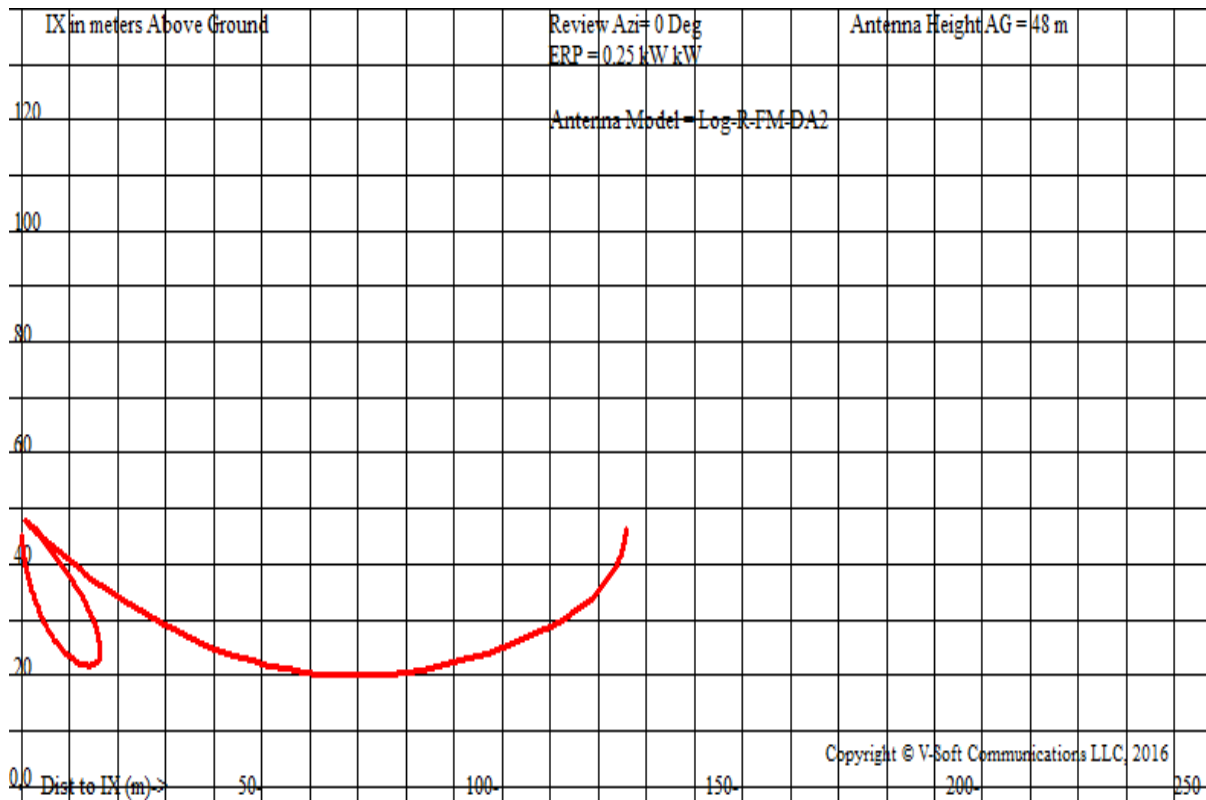
Exhibit 13 - WLAK Chilton Xltr vs WYDR: Aerial Map

1762889.Prop 118.6dBu (230)

Legend

-  1762889.Prop 118.6dBu (230) - 50 50 Field Strength: 118.6 dBu FCC [VS 03 US/FCC 30 US]
-  WYDR 78.60dBu (232) - 50 50 Field Strength: 78.6 dBu FCC [FCC 30 US/VS 03 US]





1762889.P , , Showing Protection to WYDR
 74.1204(d) Study - Using FCC 30 SEC Terrain Database
 Translator or LPFM Maximum Licensed ERP = 0.25
 Translator or LPFM Antenna Height AG = 48 Meters
 1762889.P Antenna Model = Log-R-FM-DA2

Protected Station's Contour = 78.51461 dBu
 Translator's or LPFM's full Interference contour 118.51461

Review Azimuth = 0 Degrees True
 Relative Field on the horizon at Review Azimuth = 0.950
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.226 kW
 Distance between stations = 9.7 km
 Protected Station= WYDR, 13 kW, 387 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.0	1.0	0.95	0.2375	128.2630	128.2630	048.000
05.0	0.978	0.95	0.2269	125.3771	124.9000	037.073
10.0	0.891	0.95	0.1885	114.2823	112.5461	028.155
15.0	0.768	0.95	0.1399	098.4418	095.0875	022.521
20.0	0.646	0.95	0.0991	082.8579	077.8609	019.661
25.0	0.517	0.95	0.0634	066.2478	060.0409	020.002
30.0	0.372	0.95	0.0329	047.7138	041.3214	024.143
35.0	0.210	0.95	0.0104	026.8711	022.0115	032.587
40.0	0.050	0.95	0.0006	006.4131	004.9128	043.878
45.0	0.084	0.95	0.0017	010.7100	007.5731	040.427
50.0	0.178	0.95	0.0075	022.8308	014.6754	030.511
55.0	0.227	0.95	0.0122	029.0516	016.6633	024.202
60.0	0.240	0.95	0.0137	030.7831	015.3916	021.341
65.0	0.228	0.95	0.0123	029.2440	012.3590	021.496
70.0	0.200	0.95	0.0095	025.6526	008.7737	023.894
75.0	0.160	0.95	0.0060	020.4579	005.2949	028.239
80.0	0.114	0.95	0.0031	014.6220	002.5391	033.600
85.0	0.064	0.95	0.0010	008.1447	000.7099	039.886
90.0	0.028	0.95	0.0002	003.5914	000.0000	044.409