

# Non-Interference Compliance Study

## Alpha Media Licensee, LLC

### W245AH (Facility ID: 139924)

This exhibit demonstrates compliance with all contour overlap and interference protection requirements and demonstrates full compliance with 47 C.F.R. §74.1204.

Applicant certifies that should any actual interference occur it will promptly cease operation in accordance with 47 C.F.R. §74.1203.

This study uses the NED 3 second terrain dataset.

Below is a listing of area stations whose contours are less than 25 km clear of the proposed translator.

Callsign	State	City	Channel	ERP (kW)	Class	Status	Distance (km)	Clr (km)
<b>WUSJ</b>	<b>MS</b>	<b>Madison</b>	<b>242</b>	<b>100</b>	<b>C0</b>	<b>LIC</b>	<b>14.5</b>	<b>-63.44</b>
W245AH*	MS	Ridgeland	245	0.074	D	LIC	19.38	-50.67
<b>WFMN</b>	<b>MS</b>	<b>Flora</b>	<b>247</b>	<b>19.5</b>	<b>C3</b>	<b>LIC</b>	<b>19.73</b>	<b>-19.07</b>
WSMP-LP	MS	Magee	245	0.1	L1	LIC	69.66	0.32

\* Currently licensed facility for W245AH

The only stations that are of concern are WUSJ and WFMN. WUSJ is a third adjacent Class C0 that requires that a minimum of 40 dB separation exist between its service contour and W245AH's interference contour. WFMN is a second adjacent Class C3 that requires that a minimum of 40 dB separation exist between its service contour and W245AH's interference contour. The following pages demonstrate that this proposal is in compliance with these requirements.

## Compliance with 47 C.F.R. §74.1204(d)

All Authorized second and third adjacent stations with which the proposed translator's contour overlaps their service contour are listed below. The table lists the minimum signal level of the primary station's service contour that reaches the proposed tower site for W245AH.

Facility ID	Call Sign	Contour at Tower F(50,50)
62050	WUSJ	95.3 dBu
14568	WFMN	72.4 dBu

Minimum protected contour signal level at W245AH's proposed tower site: **72.4 dBu**

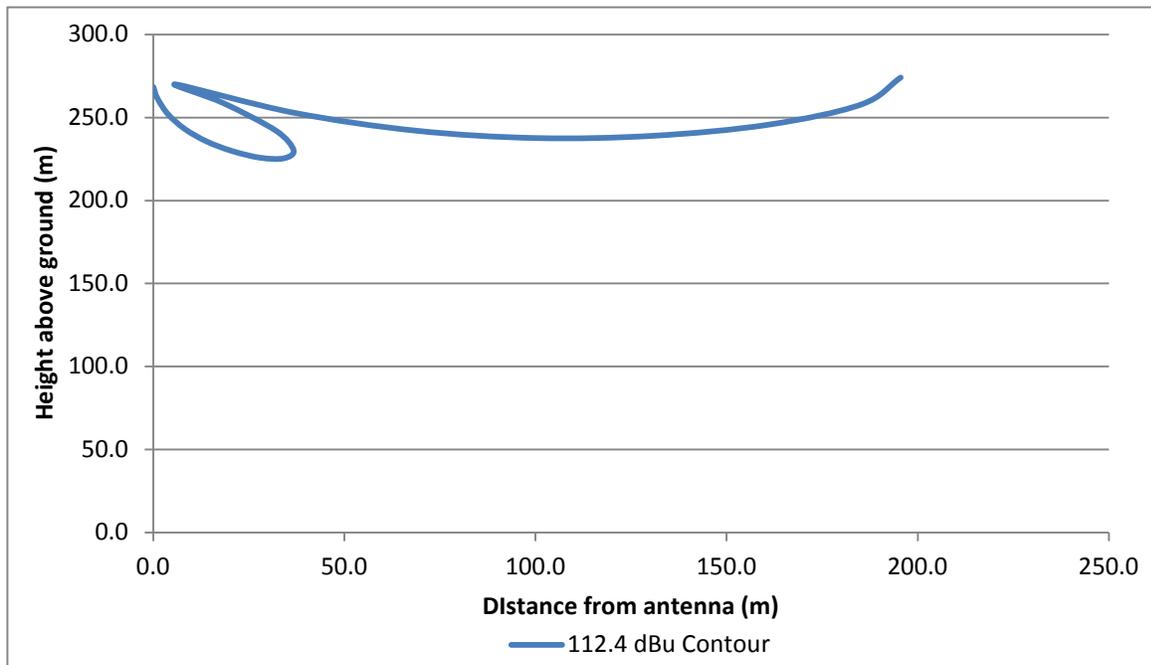
This study will use the minimum contour of 72.4 dBu to represent a worst-case potential interference level. At 40 dB above 72.4 dBu, the translator interference contour is 112.4 dBu. Calculation of distance at this power and signal level requires the use of the free-space calculation due to the distance being less than 1.5 km.

The following table uses the free space formula to calculate the worst-case height above ground level. At 112.4 dBu with a two bay, 0.85 wavelength Bext TFC2K and 135 watts the worst-case height is 225.3 meters. Therefore, no interference is predicted to reach the ground.

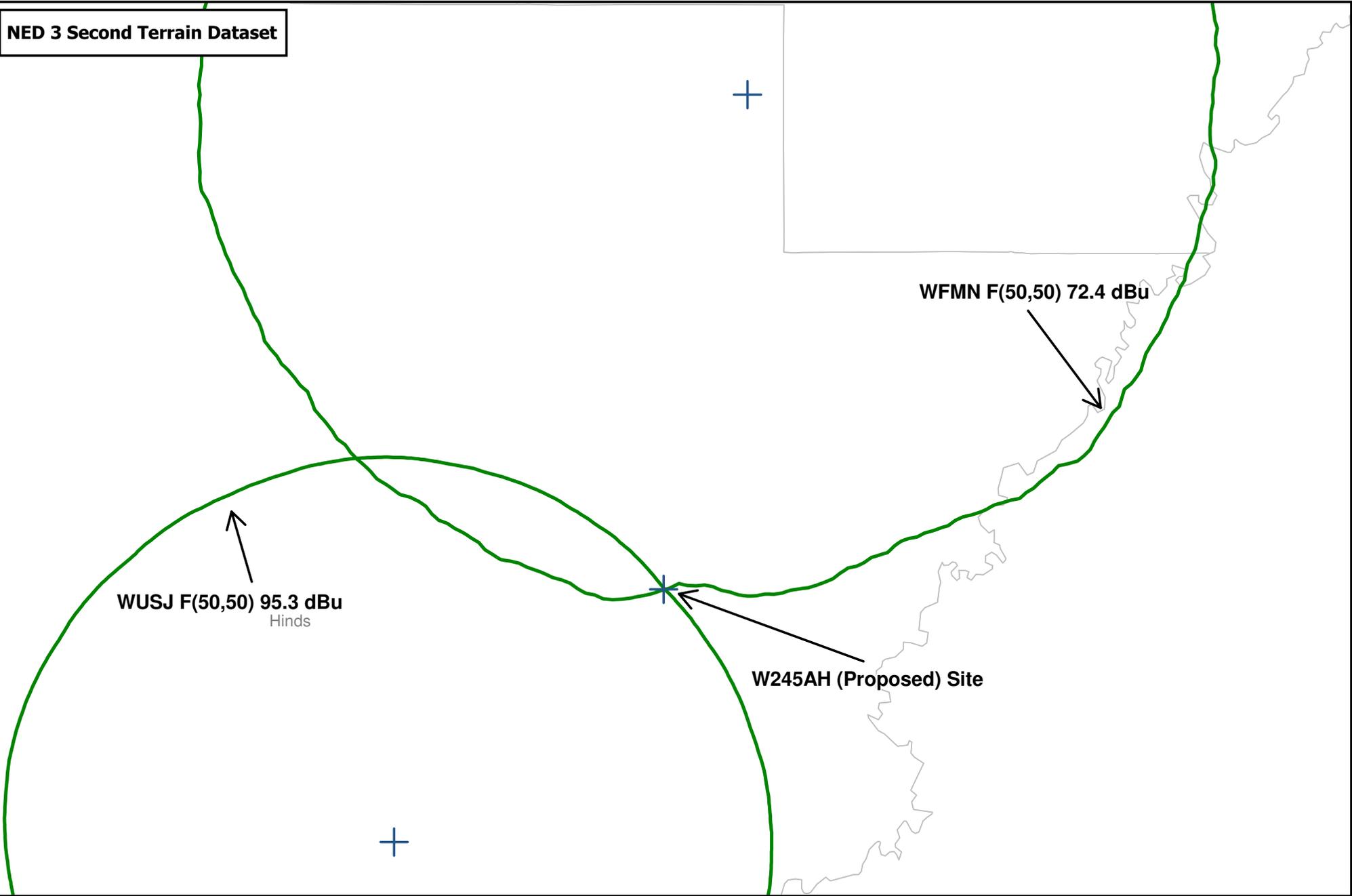
## §74.1204(d) Contour Protection Study W245AH vs. WFMM

Antenna: BEXT TFC2K- 2 Bay 0.85 Wavelength ERP (watts): 135  
 Protected Contour at tower - F(50,50): 72.4 dBu RC-AGL (m): 274  
 Interference Ratio: 40 dB Relative field at Azimuth: 1.000  
 Interference Contour - F(50,10): 112.4 dBu ERP (watts) at Azimuth: 135

DEPRESSION ANGLE	RELATIVE FIELD	ERP (WATTS)	dBk	DISTANCE (m)		
				Contour	Horizontal	AGL
0	1.000	135.0	-8.70	195.5	195.5	274.0
5	0.951	122.1	-9.13	185.9	185.2	257.8
10	0.836	94.4	-10.25	163.4	161.0	245.6
15	0.693	64.8	-11.88	135.5	130.9	238.9
20	0.545	40.1	-13.97	106.6	100.1	237.6
25	0.387	20.2	-16.94	75.7	68.6	242.0
30	0.216	6.3	-22.01	42.2	36.6	252.9
35	0.037	0.2	-37.33	7.2	5.9	269.9
40	0.122	2.0	-26.97	23.9	18.3	258.7
45	0.233	7.3	-21.35	45.6	32.2	241.8
50	0.292	11.5	-19.39	57.1	36.7	230.3
55	0.304	12.5	-19.04	59.4	34.1	225.3
60	0.285	11.0	-19.60	55.7	27.9	225.7
65	0.250	8.4	-20.74	48.9	20.7	229.7
70	0.210	6.0	-22.25	41.1	14.0	235.4
75	0.165	3.7	-24.35	32.3	8.3	242.8
80	0.116	1.8	-27.41	22.7	3.9	251.7
85	0.065	0.6	-32.44	12.7	1.1	261.3
90	0.029	0.1	-39.45	5.7	0.0	268.3
<b>WORST CASE HEIGHT AGL (m)</b>						<b>225.3</b>



**NED 3 Second Terrain Dataset**



Protected Signal Levels at Proposed Tower Site

