

# Non-Interference Compliance Study

## Alpha Media Licensee, LLC

### K278CF (Facility ID: 155142)

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.

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>WMSI-FM</b>	<b>MS</b>	<b>Jackson</b>	<b>275</b>	<b>100</b>	<b>C</b>	<b>LIC</b>	<b>11.17</b>	<b>-80.17</b>
<b>WJNT-FM1*</b>	<b>MS</b>	<b>Pearl</b>	<b>277</b>	<b>0.5</b>	<b>D</b>	<b>STA</b>	<b>18.22</b>	<b>-30.72</b>
<b>WYAB</b>	<b>MS</b>	<b>Pocahontas</b>	<b>280</b>	<b>5.4</b>	<b>A</b>	<b>LIC</b>	<b>18.48</b>	<b>-9.74</b>
<b>WYAB</b>	<b>MS</b>	<b>Pocahontas</b>	<b>280</b>	<b>5.4</b>	<b>A</b>	<b>CP</b>	<b>19.47</b>	<b>-7.73</b>
K278CF**	LA	Tallulah	278	0.099	D	LIC	78.95	-2.08

\*WJNT-FM1 is operating on a conditional STA and applicant will turn WJNT-FM1 off once K278CF begins operation.

\*\**Mattoon* Waiver – Proposed facility is mutually exclusive with existing licensed facility

The only stations that are of concern are WMSI-FM and WYAB (LIC and CP). WMSI is a second adjacent Class C that requires that a minimum of 40 dB separation exist between its service contour and K278CF's interference contour. WYAB is a second adjacent Class A that requires that a minimum of 40 dB separation exist between its service contour and K278CF's interference contour. The following pages demonstrate that all three facilities are in compliance with these requirements.

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

All Authorized second 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 K278CF.

Facility ID	Call Sign	Contour at Tower F(50,50)
59822	WMSI-FM	102.35 dBu
77646	WYAB (LIC)	67.06 dBu
77646	WYAB (CP)	65.43 dBu

Minimum protected contour signal level at K278CF's proposed tower site: **65.43 dBu**

This study will use the minimum contour of 65.43 dBu to represent a worst-case potential interference level. At 40 dB above 65.43 dBu, the translator interference contour is 105.43 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 105.43 dBu with a two bay, 0.85 wavelength Bext TFC2K and 250 watts the worst-case height is 126.2 meters. Therefore, no interference is predicted to reach the ground.

## §74.1204(d) Contour Protection Study K278CF vs. WYAB

Antenna: BEXT TFC2K- 2 Bay 0.85 Wavelength ERP (watts): 250  
 Protected Contour at tower - F(50,50): 65.43 dBu RC-AGL (m): 274  
 Interference Ratio: 40 dB Relative field at Azimuth: 1.000  
 Interference Contour - F(50,10): 105.43 dBu ERP (watts) at Azimuth: 250

DEPRESSION ANGLE	RELATIVE FIELD	ERP (WATTS)	dBk	DISTANCE (m)		
				Contour	Horizontal	AGL
0	1.000	250.0	-6.02	593.6	593.6	274.0
5	0.951	226.1	-6.46	564.5	562.3	224.8
10	0.836	174.7	-7.58	496.2	488.7	187.8
15	0.693	120.1	-9.21	411.3	397.3	167.5
20	0.545	74.3	-11.29	323.5	304.0	163.4
25	0.387	37.4	-14.27	229.7	208.2	176.9
30	0.216	11.7	-19.33	128.2	111.0	209.9
35	0.037	0.3	-34.66	22.0	18.0	261.4
40	0.122	3.7	-24.29	72.4	55.5	227.5
45	0.233	13.6	-18.67	138.3	97.8	176.2
50	0.292	21.3	-16.71	173.3	111.4	141.2
55	0.304	23.1	-16.36	180.4	103.5	126.2
60	0.285	20.3	-16.92	169.2	84.6	127.5
65	0.250	15.6	-18.06	148.4	62.7	139.5
70	0.210	11.0	-19.58	124.6	42.6	156.9
75	0.165	6.8	-21.67	97.9	25.3	179.4
80	0.116	3.4	-24.73	68.9	12.0	206.2
85	0.065	1.1	-29.76	38.6	3.4	235.6
90	0.029	0.2	-36.77	17.2	0.0	256.8
				<b>WORST CASE HEIGHT AGL (m)</b>		
				<b>126.2</b>		



