

Non-Interference Compliance

Regarding Facility id 143811

Channel 223

Description of Exhibit 13 Contents

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all of the applicable rule sections and that this application for a construction permit is in full compliance with 47 C.F.R. § 74.1204.

Let it be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 C.F.R. § 74.1203.

Page 2 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference provisions based on 47 C.F.R. § 74.1204(d), which states:

[A]n application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.

Page 3 contains a tabulation of the vertical radiation pattern of the proposed antenna and the minimum ground clearance of the interfering contour based on this pattern.

Pages 4 through 5 include a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 6 of this exhibit contains the tabulated data from the interference analysis, which shows all stations whose protected contours come within 50 km of the 34 dBμ F(50,10) contour of the proposed translator. These tabulated values were calculated using data from the FCC's CDBS files and 30 arc second terrain data. The column labeled "Adj" shows the number of channels difference between the entry and the proposed translator. The column labeled "Dist" shows the distance in km. The column labeled "Overlap" shows the area of contour overlap in square kilometers.

Page 7 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 minute quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using the free space equation and 120 radials.

Page 8 of this exhibit is an aerial photo of the vicinity surrounding the proposed translator's tower site.

Note: The tallest buildings in the zone of predicted interference are 20ft (6.1m) in height. This proposal provides 7.4m (24.3ft) ground clearance so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.

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

All authorized second and third adjacent stations with which the proposed translator has contour overlap are tabulated below. Column four show the station's signal level at the proposed translator's tower site, and column five gives the minimum value within the entire standard interfering contour of the proposed translator (100 dBμ for most classes, 94 for class B, 97 for class B1). The minimum second or third adjacent F(50,50) contour within the proposed translator's standard interfering contour was used to calculate the proposed translator's actual "worst-case" interfering contour.

Application_id	File Number	Callsign	Contour at Tower	Min. Contour
1068657	BLH20050627AAR	WBLX-FM	75.5	75.5
1185027	BLH20070510ACU	WZEW	70.5	70.5
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				70.5

FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **70.5 dBμ**, this makes the proposed translator's worst-case interfering contour **110.5 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **331.1 m** from the transmit antenna.

The maximum horizontal plane of the interfering contour was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 7 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative fields are tabulated on the following page at 5 degree increments, starting at 5 degrees below horizontal. Antenna relative field strength data was provided and certified by the manufacturer of the proposed antenna. Using a free-space calculation that neglects any loss due to reflection, the vertical ground clearance of the proposed translator's interference contour has been tabulated. As shown on the following page, the area of interference clears the tower ground level (TGL) by **7.4 m** at the lowest point. The applicant has taken into account USGS quadrangles and relevant aerial photography in stating that no structures, except possibly tower support structures, puncture the area of interference.

Note: The tallest buildings in the zone of predicted interference are 20ft (6.1m) in height. This proposal provides 7.4m (24.3ft) ground clearance so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.

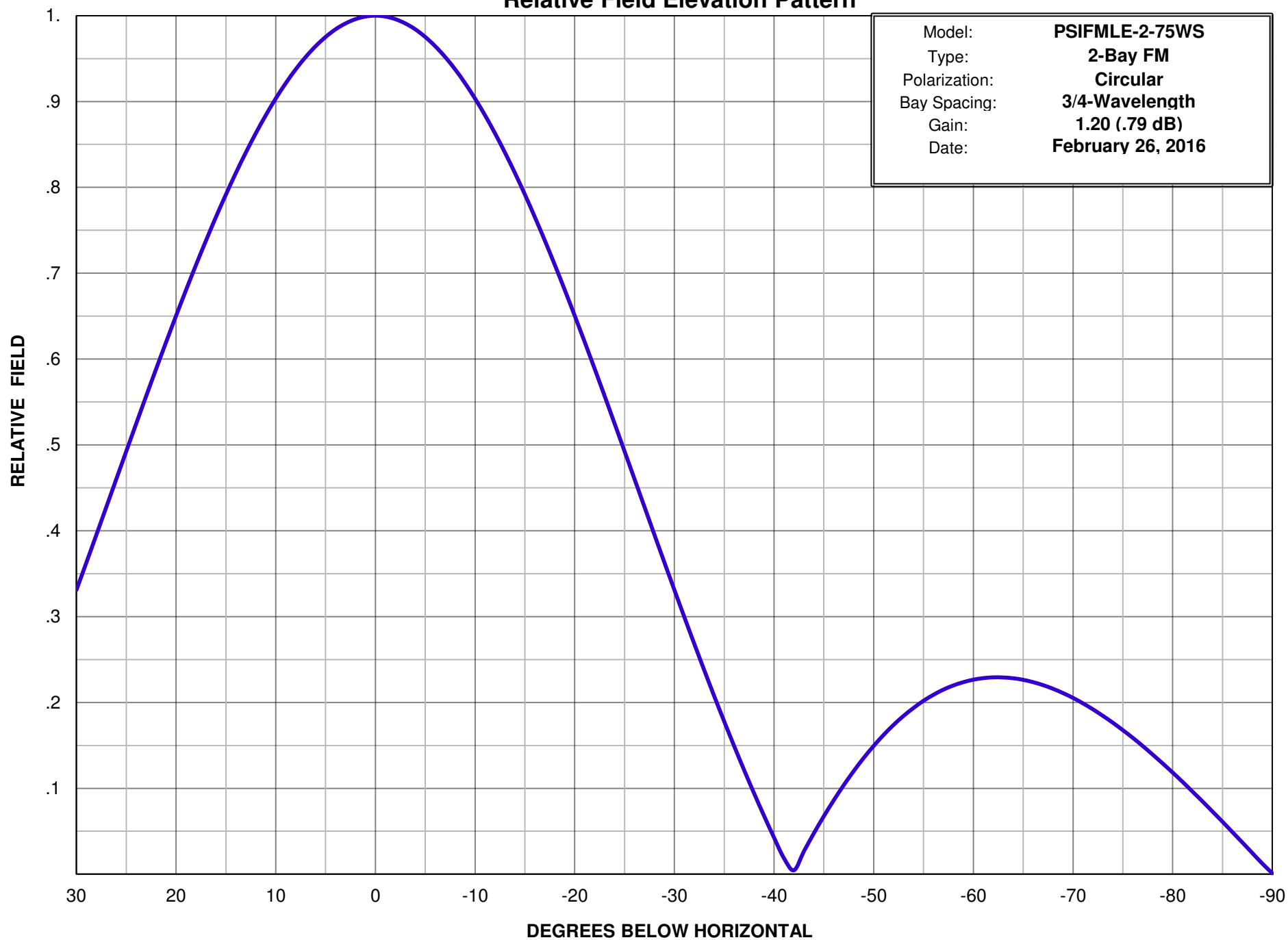
Antenna Manufacturer:	PSI
Antenna Model:	FMLB-2(.75)
CORAGL:	81 m
Maximum ERP:	0.25 kW
Interfering Contour:	110.5 dBμ
Max Int. Contour Distance:	331.1 m
Min Ground Clearance:	7.4 m

Depression Angle Below Horizontal	Antenna Relative Field	ERP (watts)	Distance to Interfering Contour from Antenna (m)	Horizontal Distance of Interfering Contour from Tower (m)	Vertical Clearance of Interfering Contour above TGL (m)
5	.975	237.7	322.8	321.6	52.9
10	.903	203.9	299.0	294.4	29.1
15	.792	156.8	262.2	253.3	13.1
20	.650	105.6	215.2	202.2	7.4
25	.493	60.8	163.2	147.9	12.0
30	.331	27.4	109.6	94.9	26.2
35	.178	7.9	58.9	48.3	47.2
40	.043	0.5	14.2	10.9	71.8
45	.068	1.2	22.5	15.9	65.1
50	.149	5.6	49.3	31.7	43.2
55	.202	10.2	66.9	38.4	26.2
60	.227	12.9	75.2	37.6	15.9
65	.226	12.8	74.8	31.6	13.2
70	.205	10.5	67.9	23.2	17.2
75	.168	7.1	55.6	14.4	27.3
80	.118	3.5	39.1	6.8	42.5
85	.061	0.9	20.2	1.8	60.9
90	.001	0.0	0.3	0.0	80.7
Minimum Clearance above TGL:					7.4 m



Propagation Systems, Inc.

Relative Field Elevation Pattern





Propagation Systems Inc.
Elevation Pattern Tabulation
Antenna: PSIFMLE-2-75WS

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-90.0	0.001	-60.000	-50.0	0.149	-16.513	-10.0	0.903	-0.883
-89.0	0.012	-38.221	-49.0	0.135	-17.364	-9.0	0.921	-0.713
-88.0	0.025	-32.201	-48.0	0.120	-18.405	-8.0	0.937	-0.561
-87.0	0.037	-28.679	-47.0	0.104	-19.677	-7.0	0.952	-0.429
-86.0	0.049	-26.207	-46.0	0.086	-21.289	-6.0	0.964	-0.315
-85.0	0.061	-24.285	-45.0	0.068	-23.404	-5.0	0.975	-0.219
-84.0	0.073	-22.748	-44.0	0.048	-26.425	-4.0	0.984	-0.139
-83.0	0.085	-21.443	-43.0	0.027	-31.481	-3.0	0.991	-0.079
-82.0	0.096	-20.349	-42.0	0.005	-46.848	-2.0	0.996	-0.036
-81.0	0.107	-19.378	-41.0	0.018	-34.664	-1.0	0.999	-0.009
-80.0	0.118	-18.538	-40.0	0.043	-27.417	0.0	1.000	0.000
-79.0	0.129	-17.792	-39.0	0.068	-23.365	1.0	0.999	-0.009
-78.0	0.139	-17.125	-38.0	0.094	-20.529	2.0	0.996	-0.036
-77.0	0.149	-16.522	-37.0	0.121	-18.329	3.0	0.991	-0.079
-76.0	0.159	-15.984	-36.0	0.149	-16.531	4.0	0.984	-0.139
-75.0	0.168	-15.508	-35.0	0.178	-14.998	5.0	0.975	-0.219
-74.0	0.176	-15.072	-34.0	0.207	-13.669	6.0	0.964	-0.315
-73.0	0.184	-14.685	-33.0	0.237	-12.489	7.0	0.952	-0.429
-72.0	0.192	-14.335	-32.0	0.268	-11.431	8.0	0.937	-0.561
-71.0	0.199	-14.026	-31.0	0.299	-10.475	9.0	0.921	-0.713
-70.0	0.205	-13.752	-30.0	0.331	-9.602	10.0	0.903	-0.882
-69.0	0.211	-13.518	-29.0	0.363	-8.801	11.0	0.884	-1.072
-68.0	0.216	-13.315	-28.0	0.395	-8.061	12.0	0.863	-1.279
-67.0	0.220	-13.146	-27.0	0.428	-7.377	13.0	0.841	-1.508
-66.0	0.224	-13.009	-26.0	0.460	-6.742	14.0	0.817	-1.757
-65.0	0.226	-12.904	-25.0	0.493	-6.151	15.0	0.792	-2.029
-64.0	0.228	-12.834	-24.0	0.525	-5.599	16.0	0.765	-2.322
-63.0	0.229	-12.800	-23.0	0.557	-5.083	17.0	0.738	-2.639
-62.0	0.229	-12.794	-22.0	0.589	-4.603	18.0	0.710	-2.979
-61.0	0.228	-12.829	-21.0	0.620	-4.154	19.0	0.680	-3.344
-60.0	0.227	-12.898	-20.0	0.650	-3.736	20.0	0.650	-3.736
-59.0	0.224	-13.009	-19.0	0.680	-3.344	21.0	0.620	-4.154
-58.0	0.220	-13.158	-18.0	0.710	-2.979	22.0	0.589	-4.603
-57.0	0.215	-13.351	-17.0	0.738	-2.639	23.0	0.557	-5.083
-56.0	0.209	-13.600	-16.0	0.765	-2.323	24.0	0.525	-5.599
-55.0	0.202	-13.894	-15.0	0.792	-2.029	25.0	0.493	-6.151
-54.0	0.194	-14.260	-14.0	0.817	-1.759	26.0	0.460	-6.742
-53.0	0.184	-14.685	-13.0	0.840	-1.510	27.0	0.428	-7.377
-52.0	0.174	-15.192	-12.0	0.863	-1.281	28.0	0.395	-8.061
-51.0	0.162	-15.795	-11.0	0.884	-1.072	29.0	0.363	-8.801

Adjacent Channel Study **For Station W223BX, Facility_id: 143811**

Co-channel through third adjacent:

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Char	Adj	Dist	Overlap
1185027	74287	BLH-20070510ACU	WZEW	.COM+, L.L.C.	C3	FAIRHOPE	AL	LIC	20.5	122	221	2	23	1.1697
1068657	2540	BLH-20050627AAR	WBLX-FM	CUMULUS LICENSING LLC	C	MOBILE	AL	LIC	98	553.4	225	2	50.1	1.1697
1315311	143804	BLFT-20090529ARO	W223AX	STEWART BROADCASTING COM	D	FOLEY	AL	LIC	0.25	86	223	0	54.9	0
583905	24513	BLH-20010118ABJ	WQYZ	CAPSTAR TX, LLC	A	OCEAN SPRINGS	MS	LIC	6	104	223	0	74	0
1687683	143794	BPFT-20150915AGF	W222BR	TIMOTHY JAMES MCEVOY TRUS	D	POLLARD	AL	CP	0.25	136	222	1	84	0
1224510	143808	BLFT-20071210ABT	DW223BF	ALAN KILGORE	D	JACKSON	AL	LIC	0.038	85	223	0	92	0
1553875	143794	BLFT-20130506AEJ	W222BR	TIMOTHY JAMES MCEVOY TRUS	D	POLLARD	AL	LIC	0.25	43	222	1	95.8	0
1720589	191570	BMPH-20160119ABE	NEW	BLACKBELT BROADCASTING, IN	A	FRISCO CITY	AL	APP	6	196.7	223	0	104.1	0
1668548	150841	BLFT-20150120AAZ	W221DH	FAITH BROADCASTING, INC.	D	BREWTON	AL	LIC	0.027	129	221	2	115.5	0
203333	11226	BLH-19941018KB	WJMG	CIRCUIT BROADCASTING COMP,	A	HATTIESBURG	MS	LIC	6	154	221	2	128.9	0
1241922	68907	BLH-20080310ADI	WGDQ	VERNON FLOYD DBA CIRCUIT B	C3	SUMRALL	MS	LIC	25	165	226	3	139.2	0
1256217	43690	BMLED-20080711AB	WMBV	THE MOODY BIBLE INSTITUTE O	C1	DIXONS MILLS	AL	LIC	62	259	220	3	160.9	0

Intermediate Frequencies (53 and 54 channels difference):

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Clr
1677383	150865	BLFT-20150504AAH	W277CS	GOFORTH MEDIA, INC.	D	SPANISH FORT	AL	LIC	0.25	257	277	54	30.3	20.3
1655627	10477	BLH-20141027AAK	WOSM	TELESOUTH COMMUNICATIONS,	C2	OCEAN SPRINGS	MS	LIC	50	153	276	53	63.7	48.7
1682227	150816	BLFT-20150715ABW	W277CC	LA PROMESA FOUNDATION	D	PENSACOLA	FL	LIC	0.25	131	277	54	95	85

SPRING HILL QUADRANGLE
ALABAMA-MOBILE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
NW/4 MOBILE 15' QUADRANGLE

