

## **Non-Interference Compliance**

Regarding Facility id 151893

Channel 299

### **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 within the zone of predicted interference are 20 ft (6.m) in height. This proposal provides 12.9m (42.3ft) 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.

<b>Application_id</b>	<b>File Number</b>	<b>Callsign</b>	<b>Contour at Tower</b>	<b>Min. Contour</b>
189460	BLH19930827KE	WMCD	62.8	62.8
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				<b>62.8</b>

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 **62.8 dBμ**, this makes the proposed translator's worst-case interfering contour **102.8 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **803.5 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 **12.9 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.

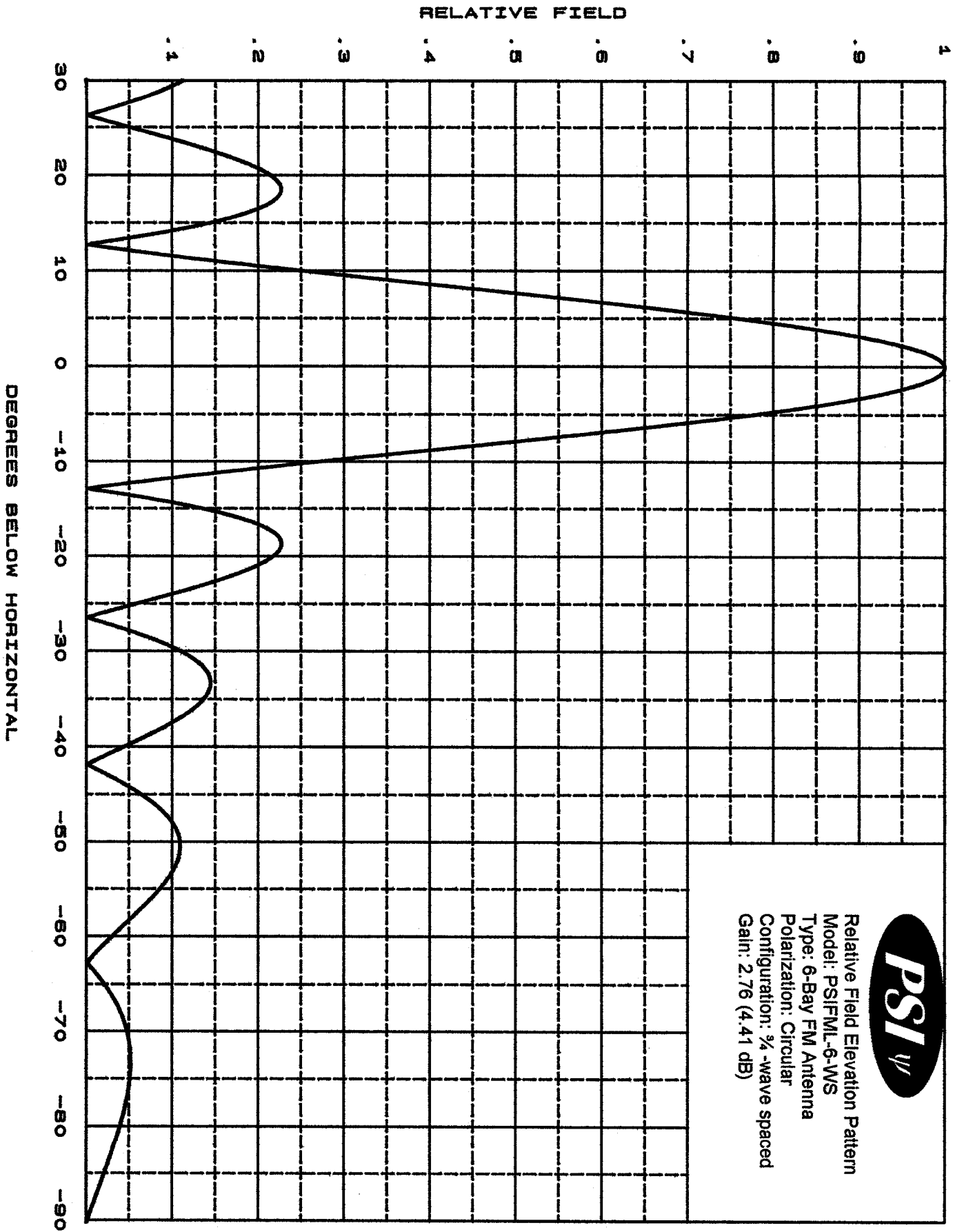
**Note: The tallest buildings within the zone of predicted interference are 20ft (6.m) in height. This proposal provides 12.9m (42.3ft) ground clearance so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.**

<b>Antenna Manufacturer:</b>	<b>PSI</b>
<b>Antenna Model:</b>	<b>FML-6(.75)</b>
<b>CORAGL:</b>	<b>80 m</b>
<b>Maximum ERP:</b>	<b>0.25 kW</b>
<b>Interfering Contour:</b>	<b>102.8 dBμ</b>
<b>Max Int. Contour Distance:</b>	<b>803.5 m</b>
<b>Min Ground Clearance:</b>	<b>12.9 m</b>

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	.768	147.5	617.1	614.7	26.2
10	.261	17.0	209.7	206.5	43.6
15	.139	4.8	111.7	107.9	51.1
20	.215	11.6	172.7	162.3	20.9
25	.054	0.7	43.4	39.3	61.7
30	.111	3.1	89.2	77.2	35.4
35	.135	4.6	108.5	88.9	17.8
40	.042	0.4	33.7	25.9	58.3
45	.064	1.0	51.4	36.4	43.6
50	.109	3.0	87.6	56.3	12.9
55	.085	1.8	68.3	39.2	24.1
60	.029	0.2	23.3	11.7	59.8
65	.021	0.1	16.9	7.1	64.7
70	.047	0.6	37.8	12.9	44.5
75	.050	0.6	40.2	10.4	41.2
80	.039	0.4	31.3	5.4	49.1
85	.020	0.1	16.1	1.4	64.0
90	.001	0.0	0.8	0.0	79.2
Minimum Clearance above TGL:					<b>12.9 m</b>



Relative Field Elevation Pattern  
Model: PSIFML-6-WS  
Type: 6-Bay FM Antenna  
Polarization: Circular  
Configuration:  $\frac{1}{4}$ -wave spaced  
Gain: 2.76 (4.41 dB)



**Propagation Systems Inc.****Elevation Pattern Tabulation****Antenna: PSIFM-6A-WS****Bay spacing: 3/4 wave**

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-90.0	0.001	-60.000	-50.0	0.109	-19.280	-10.0	0.261	-11.665
-89.0	0.004	-47.764	-49.0	0.106	-19.501	-9.0	0.366	-8.736
-88.0	0.008	-41.743	-48.0	0.100	-19.987	-8.0	0.472	-6.516
-87.0	0.012	-38.221	-47.0	0.091	-20.799	-7.0	0.577	-4.777
-86.0	0.016	-35.803	-46.0	0.079	-22.021	-6.0	0.677	-3.393
-85.0	0.020	-33.849	-45.0	0.064	-23.844	-5.0	0.768	-2.296
-84.0	0.024	-32.308	-44.0	0.047	-26.648	-4.0	0.847	-1.441
-83.0	0.028	-31.047	-43.0	0.027	-31.530	-3.0	0.912	-0.799
-82.0	0.032	-29.988	-42.0	0.005	-46.848	-2.0	0.960	-0.352
-81.0	0.035	-29.044	-41.0	0.018	-34.735	-1.0	0.990	-0.089
-80.0	0.039	-28.260	-40.0	0.042	-27.541	0.0	1.000	0.000
-79.0	0.042	-27.604	-39.0	0.065	-23.722	1.0	0.990	-0.087
-78.0	0.044	-27.054	-38.0	0.087	-21.213	2.0	0.960	-0.352
-77.0	0.047	-26.592	-37.0	0.107	-19.452	3.0	0.912	-0.798
-76.0	0.049	-26.234	-36.0	0.123	-18.200	4.0	0.847	-1.440
-75.0	0.050	-25.968	-35.0	0.135	-17.384	5.0	0.768	-2.294
-74.0	0.051	-25.838	-34.0	0.142	-16.928	6.0	0.677	-3.391
-73.0	0.051	-25.813	-33.0	0.144	-16.836	7.0	0.577	-4.775
-72.0	0.051	-25.890	-32.0	0.139	-17.115	8.0	0.472	-6.513
-71.0	0.049	-26.127	-31.0	0.128	-17.843	9.0	0.366	-8.729
-70.0	0.047	-26.564	-30.0	0.111	-19.124	10.0	0.261	-11.660
-69.0	0.044	-27.173	-29.0	0.087	-21.228	11.0	0.161	-15.844
-68.0	0.040	-28.058	-28.0	0.057	-24.841	12.0	0.069	-23.193
-67.0	0.034	-29.309	-27.0	0.023	-32.754	13.0	0.013	-38.009
-66.0	0.028	-31.095	-26.0	0.015	-36.745	14.0	0.083	-21.663
-65.0	0.021	-33.720	-25.0	0.054	-25.313	15.0	0.139	-17.134
-64.0	0.012	-38.329	-24.0	0.094	-20.515	16.0	0.182	-14.814
-63.0	0.003	-50.816	-23.0	0.132	-17.571	17.0	0.210	-13.562
-62.0	0.007	-42.949	-22.0	0.167	-15.563	18.0	0.224	-12.986
-61.0	0.018	-34.880	-21.0	0.195	-14.199	19.0	0.226	-12.933
-60.0	0.029	-30.680	-20.0	0.215	-13.339	20.0	0.215	-13.339
-59.0	0.041	-27.764	-19.0	0.226	-12.933	21.0	0.195	-14.199
-58.0	0.053	-25.584	-18.0	0.224	-12.986	22.0	0.167	-15.563
-57.0	0.064	-23.864	-17.0	0.210	-13.562	23.0	0.132	-17.561
-56.0	0.075	-22.499	-16.0	0.182	-14.814	24.0	0.094	-20.515
-55.0	0.085	-21.427	-15.0	0.139	-17.125	25.0	0.054	-25.313
-54.0	0.094	-20.571	-14.0	0.083	-21.663	26.0	0.015	-36.745
-53.0	0.101	-19.948	-13.0	0.013	-37.905	27.0	0.023	-32.754
-52.0	0.106	-19.514	-12.0	0.069	-23.193	28.0	0.057	-24.841
-51.0	0.108	-19.293	-11.0	0.161	-15.852	29.0	0.087	-21.243

# **Adjacent Channel Study** **For Station W245BW, Facility\_id: 151893**

## **Co-channel through third adjacent:**

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Char	Adj	Dist	Overlap
189460	65607	BLH-19930827KE	WMCD	RADIO STATESBORO, INC.	C3	CLAXTON	GA	LIC	25	143	297	2	33.8	1.4918
1640695	194781	BMPL-20140617ABO	WRUU-LP	UNITARIAN UNIVERSALIST CHUF	L1	SAVANNAH	GA	CP MOD	0	57	298	1	78.8	0
192034	5167	BLED-19931118KA	WYFA	BIBLE BROADCASTING NETWOF	C3	WAYNESBORO	GA	LIC	25	165	296	3	80.6	0
1284672	15025	BLH-20081217AAH	WDBN	DOWDY PARTNERS	C3	WRIGHTSVILLE	GA	LIC	25	193	300	1	89.4	0
627301	72387	BMLH-20030218AAP	WRWN	ALPHA MEDIA LICENSEE LLC	C2	PORT ROYAL	SC	LIC	24	222	300	1	96.2	0
1492073	170483	BLH-20120430ADW	WSGT	MATTOX BROADCASTING, INC.	A	PATTERSON	GA	LIC	6	123.9	296	3	123.2	0
198516	46967	BLH-19940421KB	WPRW-FM	CAPSTAR TX LLC	C2	MARTINEZ	GA	LIC	24.5	283	299	0	134.8	0
282605	63431	BLH-19990310KF	WHFX	AMFM RADIO LICENSES, L.L.C.	C2	DARIEN	GA	LIC	50	148	299	0	146.8	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
1284189	150125	BLFT-20081210AEA	W246BQ	RADIOJONES, LLC	D	SWAINSBORO	GA	LIC	0.225	171	246	53	50.8	40.8
1167794	15849	BLH-20070123ABV	WTHB-FM	PERRY BROADCASTING OF AUG	C3	WRENS	GA	LIC	6.2	241.3	245	54	99.3	87.3





Facility id: 151893;  
Area of Interference;



