

## **Non-Interference Compliance**

Regarding Facility id 142033

Channel 260

### **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.

### 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>
1126915	BLH20060427AFE	KISS-FM	66.7	66.7
527220	BMLH20001010ACO	KCYY	69.8	69.4
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				<b>66.7</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 **66.7 dBμ**, this makes the proposed translator's worst-case interfering contour **106.7 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **421.6 m** from the transmit antenna.

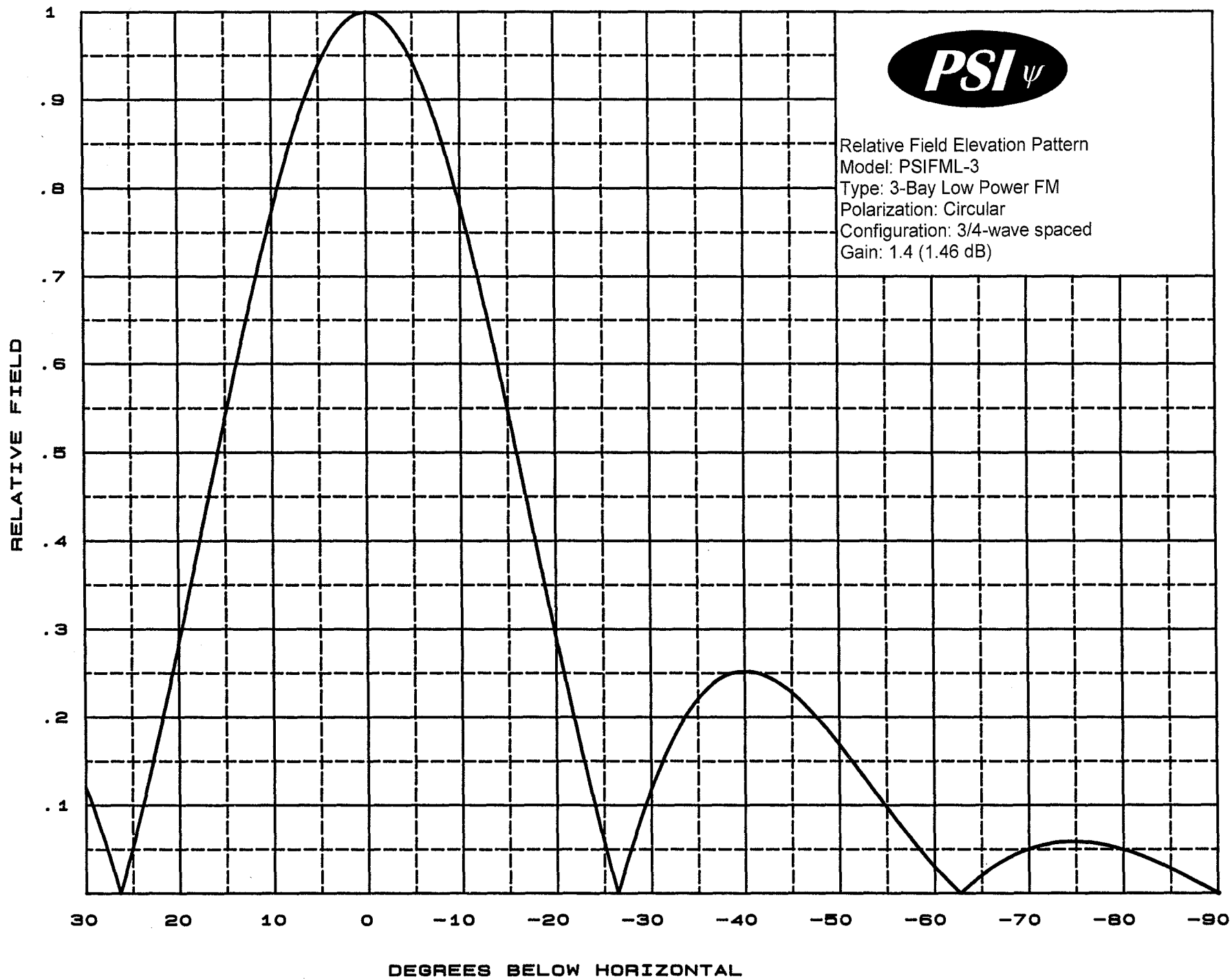
The maximum horizontal plane of the interfering contour was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 7 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative 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 **17.7 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. Hence, in accordance with 47 C.F.R. § 74.1204(d) and the clarification provided by the FCC in the decision *Re: Living Way Ministries* (FCC 02-244), 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-3(.75)</b>
<b>CORAGL:</b>	<b>86 m</b>
<b>Maximum ERP:</b>	<b>0.169 kW</b>
<b>Interfering Contour:</b>	<b>106.7 dBμ</b>
<b>Max Int. Contour Distance:</b>	<b>421.6 m</b>
<b>Min Ground Clearance:</b>	<b>17.7 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	.941	149.6	396.8	395.3	51.4
10	.777	102.0	327.6	322.6	29.1
15	.543	49.8	229.0	221.2	26.7
20	.287	13.9	121.0	113.7	44.6
25	.055	0.5	23.2	21.0	76.2
30	.120	2.4	50.6	43.8	60.7
35	.222	8.3	93.6	76.7	32.3
40	.252	10.7	106.3	81.4	17.7
45	.227	8.7	95.7	67.7	18.3
50	.168	4.8	70.8	45.5	31.7
55	.096	1.6	40.5	23.2	52.8
60	.030	0.2	12.6	6.3	75.0
65	.021	0.1	8.9	3.7	78.0
70	.050	0.4	21.1	7.2	66.2
75	.059	0.6	24.9	6.4	62.0
80	.050	0.4	21.1	3.7	65.2
85	.028	0.1	11.8	1.0	74.2
90	.001	0.0	0.4	0.0	85.6
Minimum Clearance above TGL:					<b>17.7 m</b>



Relative Field Elevation Pattern  
Model: PSIFML-3  
Type: 3-Bay Low Power FM  
Polarization: Circular  
Configuration: 3/4-wave spaced  
Gain: 1.4 (1.46 dB)





**Propagation Systems Inc.**  
 Elevation Pattern Tabulation  
 Antenna: PSIFML-3 Special  
 Bay spacing: 3/4 wave

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-90.0	0.001	-60.000	-50.0	0.168	-15.500	-10.0	0.777	-2.194
-89.0	0.006	-44.795	-49.0	0.181	-14.829	-9.0	0.817	-1.761
-88.0	0.012	-38.775	-48.0	0.194	-14.240	-8.0	0.853	-1.379
-87.0	0.017	-35.329	-47.0	0.206	-13.714	-7.0	0.886	-1.049
-86.0	0.023	-32.869	-46.0	0.217	-13.266	-6.0	0.916	-0.766
-85.0	0.028	-31.047	-45.0	0.227	-12.881	-5.0	0.941	-0.529
-84.0	0.033	-29.622	-44.0	0.235	-12.562	-4.0	0.962	-0.338
-83.0	0.038	-28.467	-43.0	0.242	-12.308	-3.0	0.978	-0.190
-82.0	0.042	-27.510	-42.0	0.248	-12.126	-2.0	0.990	-0.085
-81.0	0.046	-26.705	-41.0	0.251	-12.010	-1.0	0.998	-0.021
-80.0	0.050	-26.073	-40.0	0.252	-11.968	0.0	1.000	0.000
-79.0	0.053	-25.559	-39.0	0.251	-12.004	1.0	0.998	-0.021
-78.0	0.055	-25.169	-38.0	0.248	-12.126	2.0	0.990	-0.085
-77.0	0.057	-24.887	-37.0	0.242	-12.336	3.0	0.978	-0.190
-76.0	0.058	-24.682	-36.0	0.233	-12.657	4.0	0.962	-0.338
-75.0	0.059	-24.614	-35.0	0.222	-13.092	5.0	0.941	-0.529
-74.0	0.059	-24.637	-34.0	0.207	-13.676	6.0	0.916	-0.766
-73.0	0.058	-24.772	-33.0	0.190	-14.432	7.0	0.886	-1.049
-72.0	0.056	-25.027	-32.0	0.170	-15.414	8.0	0.853	-1.379
-71.0	0.054	-25.411	-31.0	0.146	-16.700	9.0	0.817	-1.759
-70.0	0.050	-25.968	-30.0	0.120	-18.427	10.0	0.777	-2.194
-69.0	0.046	-26.733	-29.0	0.090	-20.871	11.0	0.734	-2.683
-68.0	0.041	-27.731	-28.0	0.058	-24.704	12.0	0.689	-3.233
-67.0	0.035	-29.081	-27.0	0.023	-32.754	13.0	0.642	-3.848
-66.0	0.028	-30.954	-26.0	0.015	-36.745	14.0	0.593	-4.534
-65.0	0.021	-33.656	-25.0	0.055	-25.217	15.0	0.543	-5.301
-64.0	0.012	-38.221	-24.0	0.098	-20.213	16.0	0.492	-6.156
-63.0	0.003	-50.816	-23.0	0.142	-16.928	17.0	0.441	-7.116
-62.0	0.007	-42.949	-22.0	0.189	-14.460	18.0	0.389	-8.196
-61.0	0.018	-34.880	-21.0	0.238	-12.484	19.0	0.338	-9.425
-60.0	0.030	-30.546	-20.0	0.287	-10.839	20.0	0.287	-10.834
-59.0	0.042	-27.541	-19.0	0.338	-9.425	21.0	0.238	-12.484
-58.0	0.055	-25.217	-18.0	0.389	-8.199	22.0	0.189	-14.460
-57.0	0.068	-23.307	-17.0	0.441	-7.116	23.0	0.143	-16.919
-56.0	0.082	-21.711	-16.0	0.492	-6.159	24.0	0.098	-20.200
-55.0	0.096	-20.335	-15.0	0.543	-5.301	25.0	0.055	-25.193
-54.0	0.111	-19.124	-14.0	0.593	-4.536	26.0	0.015	-36.745
-53.0	0.125	-18.051	-13.0	0.642	-3.850	27.0	0.023	-32.754
-52.0	0.140	-17.106	-12.0	0.689	-3.234	28.0	0.058	-24.704
-51.0	0.154	-16.253	-11.0	0.734	-2.683	29.0	0.090	-20.871
						30.0	0.120	-18.438

file: FML 3-bay elevation tabulation

revision: A

Date: 1/28/08

# **Adjacent Channel Study** **For Station NEW, Facility\_id: 142033**

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

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCMSL	Chan	Adj	Dist	Overlap
527220	48718	BMLH-20001010ACO	KCYY	COX RADIO, INC.	C0	SAN ANTONIO	TX	LIC	98	612	262	2	48.5	2.6119
1126915	34976	BLH-20060427AFE	KISS-FM	COX RADIO, INC.	C0	SAN ANTONIO	TX	LIC	97.7	611	258	2	66.8	2.6119
1549893	148478	BNPFT-20030317BCV	NEW	GWENDOLYNN TELLEZ	D	SAN MARCOS	TX	APP	0.05	259	260	0	51.4	0
1431714	82261	BLFT-20110607ABI	K259AJ	EMMIS AUSTIN RADIO BROADCASTING COMPANY,	D	AUSTIN	TX	LIC	0.215	490	259	1	77.6	0
1549983	139276	BNPFT-20030313BND	NEW	BIG BEND BROADCASTING	D	ROLLINGWOOD	TX	APP	0.075	346	263	3	77.7	0
1528936	148373	BLFT-20121128ABK	K261DW	JONAH CREEK MEDIA	D	AUSTIN	TX	LIC	0.099	593	261	1	77.8	0
1541868	148373	BPFT-20130219ADJ	K261DW	JONAH CREEK MEDIA	D	AUSTIN	TX	CP	0.099	593	261	1	77.8	0
1518816	165377	BLH-20121029AAS	KRZS	MUNBILLA KERRVILLE, LTD.	C3	HUNT	TX	LIC	11	723	260	0	84.5	0
1103702	88370	BLH-20051208ACB	KOKE-FM	REO RADIO GROUP, LLC	A	THORNDALE	TX	LIC	6	250	257	3	127.4	0

## **Intermediate Frequencies (53 and 54 channels difference):**

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCMSL	Channel	Adj	Dist	Clr
1496762	65334	BLED-20120423ABR	KSTX	TEXAS PUBLIC RADIO	C1	SAN ANTONIO	TX	LIC	72	552	206	54	48.5	26.5









300 yds