

## **Non-Interference Compliance**

Regarding Facility id 151372

Channel 283

### **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 20ft (6m) in height. This application provides 23.7m (77.8ft) 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
1057848	BLH20050422AAK	KKFS	70.4	70.4
71821	BLH19840815CB	KNCI	73.9	72.4
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				<b>70.4</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 **70.4 dBμ**, this makes the proposed translator's worst-case interfering contour **110.4 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **334.9 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 **23.7 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.

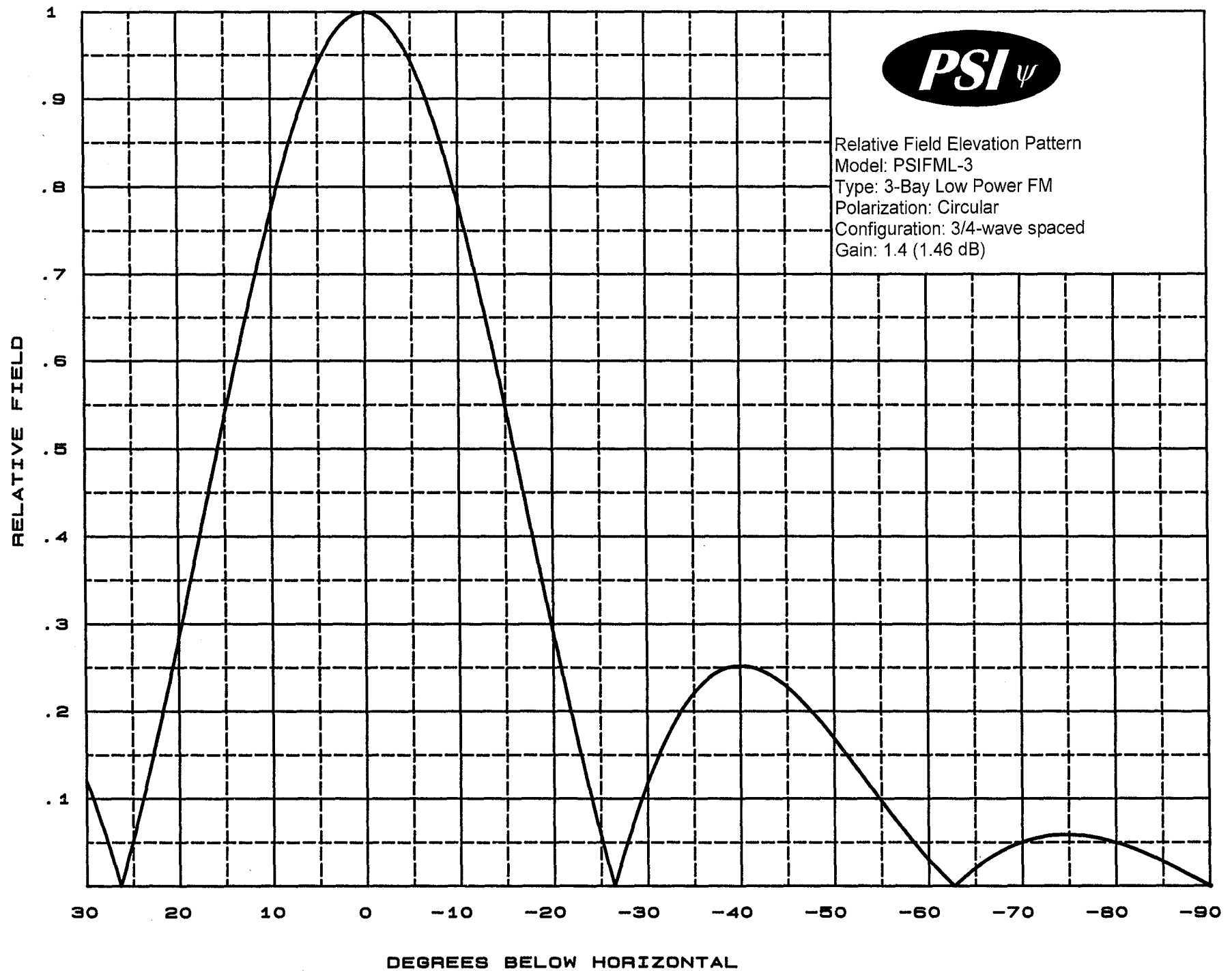
**Note: The tallest buildings within the zone of predicted interference are 20ft (6m) in height. This application provides 23.7m (77.8ft) ground clearance so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.**

<b>Antenna Manufacturer:</b>	<b>PSI</b>
<b>Antenna Model:</b>	<b>FML-3(.75)</b>
<b>CORAGL:</b>	<b>78 m</b>
<b>Maximum ERP:</b>	<b>0.25 kW</b>
<b>Interfering Contour:</b>	<b>110.4 dBμ</b>
<b>Max Int. Contour Distance:</b>	<b>334.9 m</b>
<b>Min Ground Clearance:</b>	<b>23.7 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	221.4	315.2	314.0	50.5
10	.777	150.9	260.3	256.3	32.8
15	.543	73.7	181.9	175.7	30.9
20	.287	20.6	96.1	90.3	45.1
25	.055	0.8	18.4	16.7	70.2
30	.120	3.6	40.2	34.8	57.9
35	.222	12.3	74.4	60.9	35.4
40	.252	15.9	84.4	64.7	23.7
45	.227	12.9	76.0	53.8	24.2
50	.168	7.1	56.3	36.2	34.9
55	.096	2.3	32.2	18.4	51.7
60	.030	0.2	10.0	5.0	69.3
65	.021	0.1	7.0	3.0	71.6
70	.050	0.6	16.7	5.7	62.3
75	.059	0.9	19.8	5.1	58.9
80	.050	0.6	16.7	2.9	61.5
85	.028	0.2	9.4	0.8	68.7
90	.001	0.0	0.3	0.0	77.7
Minimum Clearance above TGL:					<b>23.7 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 K252DO, Facility\_id: 151372**

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

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Char	Adj	Dist	Overlap
71821	20353	BLH-19840815CB	KNCI	CBS RADIO STATIONS INC.	B	SACRAMENTO	CA	LIC	50	333	286	3	24.6	3.5788
1057848	56366	BLH-20050422AAK	KKFS	NEW INSPIRATION BROADCASTI	A	LINCOLN	CA	LIC	6	369	280	3	8.7	1.2773
1752891	144146	BLFT-20170313AAG	K284CM	EDGEWATER BROADCASTING, II	D	SACRAMENTO	CA	LIC	0.25	139	284	1	50.1	0
1742876	151371	BPFT-20160729AFX	K245AU	TOM F. HUTH	D	MARYSVILLE	CA	CP	0.25	73	282	1	55.2	0
1172371	124166	BLL-20070208AAU	KCYC-LP	NORTH VALLEY CALVARY CHAPI	L1	YUBA CITY	CA	LIC	0	47	284	1	57.8	0
1090172	144606	BLFT-20051007AAK	K283AY	LA FAVORITA RADIO NETWORK,	D	WEST POINT	CA	LIC	0.13	1049	283	0	62.8	0
1634328	83228	BPFT-20130329AAL	K284AG	NEVADA CITY COMMUNITY BRO/	D	WOODLAND	CA	CP	0.13	30	284	1	64	0
625791	53653	BLH-20030218AAQ	KXSE	ENTRAVISION HOLDINGS, LLC	A	DAVIS	CA	LIC	3.4	147	282	1	64.1	0
1683949	195602	BLL-20150727AAT	KYTP-LP	IGLESIA ROSA DE SARON	L1	GALT	CA	LIC	0	45	283	0	71.2	0
1016422	156135	BLFT-20040929AFG	K286AN	NEVADA CITY COMMUNITY BRO/	D	TRUCKEE	CA	LIC	0.01	2635	286	3	87.8	0
1332499	83228	BLFT-20090904ACH	K284AG	NEVADA CITY COMMUNITY BRO/	D	WOODLAND	CA	LIC	0.01	587	284	1	95.2	0
194669	7914	BLH-19940204KM	KYIX	BUTTE BROADCASTING COMPAI	A	SOUTH OROVILLE	CA	LIC	0.26	932	285	2	95.8	0
1603732	156504	BLFT-20131204AOR	K283AR	BUTTE BROADCASTING COMPAI	D	CHICO	CA	LIC	0.25	946	283	0	95.8	0
1750595	194202	BLL-20170202ACK	KELR-LP	ETERNAL LIFE RADIO	L1	STOCKTON	CA	LIC	0	29.8	284	1	101.9	0
1722835	144158	BPFT-20160301AGU	K287BS	HISPANIC FAMILY CHRISTIAN NE	D	STOCKTON	CA	CP	0.17	37	286	3	108.4	0
213328	38457	BMLH-19950831KA	KDOT	LOTUS RADIO CORP.	C	RENO	NV	LIC	25	2967	283	0	111	0
1589844	138917	BLFT-20131115AIR	K281BT	SIERRA BROADCASTING CORPC	D	PORTOLA	CA	LIC	0.25	2225	281	2	113.4	0
156398	54773	BLFTB-19910122TP	KFOG-FM3	RADIO LICENSE HOLDING SRC L	D	PLEASANTON, ET	CA	LIC	0.185	1155	283	0	133.4	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
200174	11273	BLH-19940615KA	KYRV	AMFM TEXAS LICENSES LLC	B1	ROSEVILLE	CA	LIC	25	203	229	54	20.9	8.9
492270	55494	BLH-20000208ABR	KRLT	D&H BROADCASTING LLC	A	SOUTH LAKE TAHOE	CA	LIC	3	1989	230	53	94.6	84.6





- Contours are in meters
- Highways, manmade
- Water features
- Woodland
- Geographic



Produced by the United

Compiled from USGS 1:24 000 scale maps dated 1968-1981. Planimeter measurements taken 1987 and information not field checked

North American Datum of 1983  
10 000-meter grid: Universal  
25 000-foot ticks: California

The values of the shift between the datum of 1983 (NAD 83) for 7.5-minute National Geodetic Survey NA

There may be private inholdings within the National or State reserved

CONTOUR INTERVAL 20 FEET  
SUPPLEMENTARY CONTOUR INTERVAL 10 FEET  
NATIONAL GEODETIC VERTICAL DATUM  
ELEVATIONS SHOWN TO THE NEAREST FOOT

THIS MAP COMPLIES WITH

#### CONVERSION TABLE

Meters	Feet
1	3.2808
2	6.5617
3	9.8425
4	13.1234
5	16.4042
6	19.6850
7	22.9659
8	26.2467
9	29.5276
10	32.8084

To convert meters to feet multiply by 3.2808

To convert feet to meters multiply by 0.3048

DEC

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