

## **Non-Interference Compliance**

Regarding Facility id 150261

Channel 289

### **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 (6.1m) in height. This proposal provides 20m (66ft) 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
1027274	BLH20041116AEG	KGAM	65.9	65.9
	Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour			<b>65.9</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 **65.9 dBμ**, this makes the proposed translator's worst-case interfering contour **105.9 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **562.3 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 **20 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.

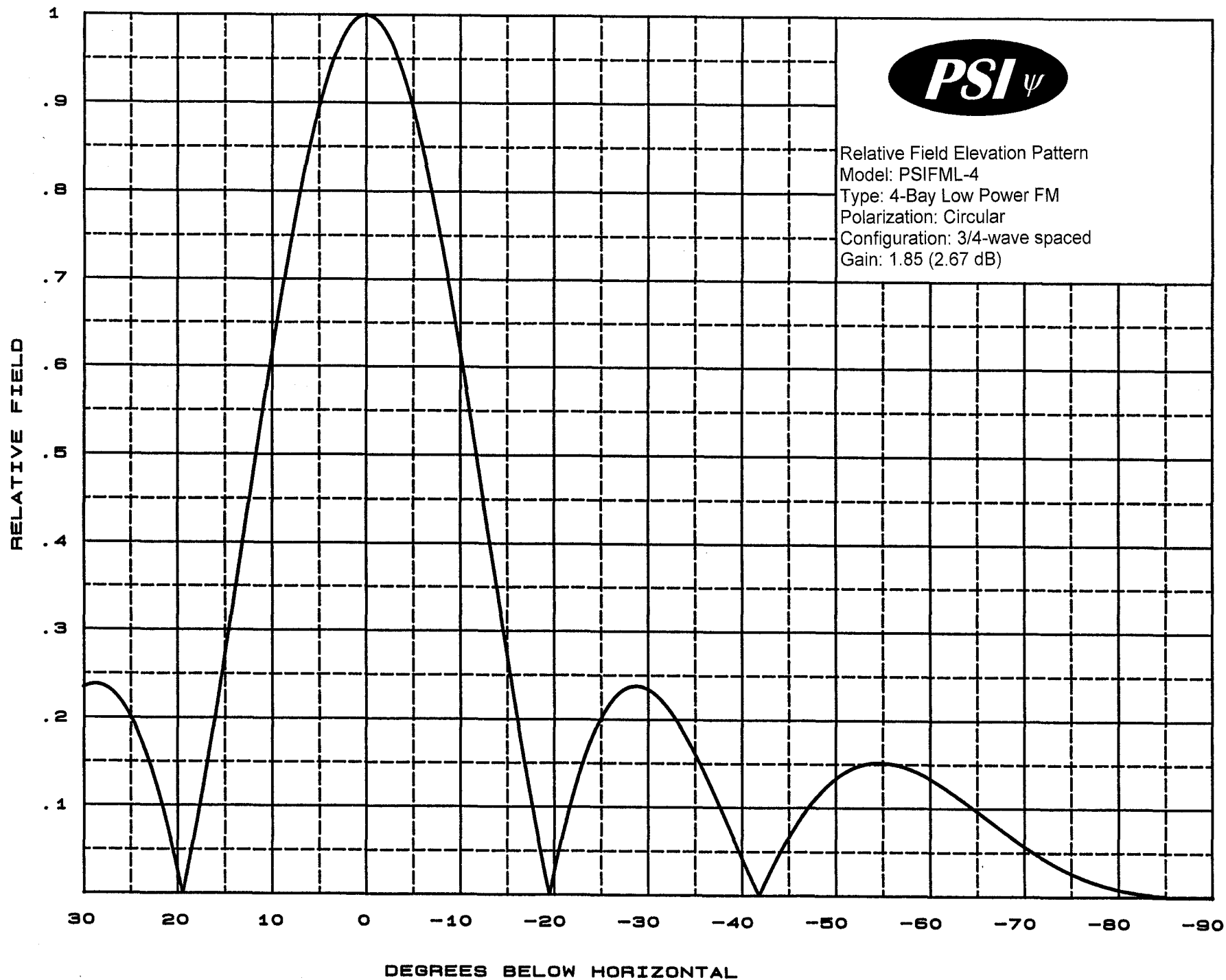
**Note: The tallest buildings within the zone of predicted interference are 20ft (6.1m) in height. This proposal provides 20m (66ft) ground clearance so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.**

<b>Antenna Manufacturer:</b>	<b>PSI</b>
<b>Antenna Model:</b>	<b>FML-4 (.75)</b>
<b>CORAGL:</b>	<b>90 m</b>
<b>Maximum ERP:</b>	<b>0.25 kW</b>
<b>Interfering Contour:</b>	<b>105.9 dBμ</b>
<b>Max Int. Contour Distance:</b>	<b>562.3 m</b>
<b>Min Ground Clearance:</b>	<b>20 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	.894	199.8	502.7	500.8	46.2
10	.617	95.2	346.9	341.7	29.8
15	.272	18.5	152.9	147.7	50.4
20	.027	0.2	15.2	14.3	84.8
25	.201	10.1	113.0	102.4	42.2
30	.234	13.7	131.6	114.0	24.2
35	.161	6.5	90.5	74.2	38.1
40	.043	0.5	24.2	18.5	74.5
45	.086	1.8	48.4	34.2	55.8
50	.133	4.4	74.8	48.1	32.7
55	.152	5.8	85.5	49.0	20.0
60	.133	4.4	74.8	37.4	25.2
65	.097	2.4	54.5	23.1	40.6
70	.057	0.8	32.1	11.0	59.9
75	.027	0.2	15.2	3.9	75.3
80	.008	0.0	4.5	0.8	85.6
85	.001	0.0	0.6	0.0	89.4
90	.001	0.0	0.6	0.0	89.4
Minimum Clearance above TGL:					<b>20 m</b>



Relative Field Elevation Pattern  
Model: PSIFML-4  
Type: 4-Bay Low Power FM  
Polarization: Circular  
Configuration: 3/4-wave spaced  
Gain: 1.85 (2.67 dB)





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

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-90.0	0.001	-60.828	-50.0	0.133	-17.511	-10.0	0.617	-4.190
-89.0	0.001	-60.828	-49.0	0.124	-18.146	-9.0	0.682	-3.325
-88.0	0.001	-60.828	-48.0	0.112	-18.995	-8.0	0.743	-2.583
-87.0	0.001	-60.828	-47.0	0.099	-20.093	-7.0	0.799	-1.950
-86.0	0.001	-60.828	-46.0	0.083	-21.568	-6.0	0.850	-1.415
-85.0	0.001	-60.828	-45.0	0.066	-23.581	-5.0	0.894	-0.974
-84.0	0.002	-54.807	-44.0	0.047	-26.536	-4.0	0.931	-0.618
-83.0	0.003	-50.816	-43.0	0.027	-31.530	-3.0	0.961	-0.346
-82.0	0.004	-47.448	-42.0	0.004	-47.143	-2.0	0.982	-0.154
-81.0	0.006	-44.350	-41.0	0.018	-34.664	-1.0	0.996	-0.038
-80.0	0.008	-41.584	-40.0	0.043	-27.417	0.0	1.000	0.000
-79.0	0.011	-39.244	-39.0	0.067	-23.482	1.0	0.996	-0.038
-78.0	0.014	-37.021	-38.0	0.092	-20.770	2.0	0.983	-0.153
-77.0	0.018	-35.027	-37.0	0.116	-18.740	3.0	0.961	-0.345
-76.0	0.022	-33.164	-36.0	0.139	-17.134	4.0	0.931	-0.618
-75.0	0.027	-31.481	-35.0	0.161	-15.860	5.0	0.894	-0.972
-74.0	0.032	-29.946	-34.0	0.181	-14.829	6.0	0.850	-1.415
-73.0	0.037	-28.537	-33.0	0.199	-14.006	7.0	0.799	-1.948
-72.0	0.044	-27.203	-32.0	0.215	-13.370	8.0	0.743	-2.582
-71.0	0.050	-25.968	-31.0	0.226	-12.904	9.0	0.682	-3.325
-70.0	0.057	-24.841	-30.0	0.234	-12.607	10.0	0.617	-4.188
-69.0	0.065	-23.782	-29.0	0.238	-12.473	11.0	0.550	-5.193
-68.0	0.072	-22.802	-28.0	0.237	-12.517	12.0	0.481	-6.361
-67.0	0.080	-21.905	-27.0	0.230	-12.748	13.0	0.411	-7.728
-66.0	0.088	-21.078	-26.0	0.219	-13.200	14.0	0.341	-9.347
-65.0	0.097	-20.308	-25.0	0.201	-13.920	15.0	0.272	-11.305
-64.0	0.105	-19.614	-24.0	0.178	-14.983	16.0	0.205	-13.752
-63.0	0.112	-18.995	-23.0	0.149	-16.540	17.0	0.141	-16.993
-62.0	0.120	-18.427	-22.0	0.114	-18.867	18.0	0.081	-21.840
-61.0	0.127	-17.926	-21.0	0.073	-22.712	19.0	0.025	-32.147
-60.0	0.133	-17.491	-20.0	0.027	-31.431	20.0	0.027	-31.481
-59.0	0.139	-17.125	-19.0	0.025	-32.201	21.0	0.073	-22.730
-58.0	0.144	-16.827	-18.0	0.081	-21.840	22.0	0.114	-18.867
-57.0	0.148	-16.602	-17.0	0.141	-16.993	23.0	0.149	-16.540
-56.0	0.150	-16.452	-16.0	0.205	-13.752	24.0	0.178	-14.990
-55.0	0.152	-16.374	-15.0	0.272	-11.310	25.0	0.201	-13.920
-54.0	0.152	-16.391	-14.0	0.341	-9.351	26.0	0.219	-13.200
-53.0	0.150	-16.496	-13.0	0.411	-7.731	27.0	0.230	-12.748
-52.0	0.146	-16.709	-12.0	0.481	-6.364	28.0	0.237	-12.517
-51.0	0.141	-17.040	-11.0	0.550	-5.195	29.0	0.238	-12.473
						30.0	0.234	-12.607

file: FML 4-bay elevation tabulation

revision: A

Date: 1/28/08

## Adjacent Channel Study For Station K287AS, Facility\_id: 150261

### Co-channel through third adjacent:

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCMSL	Chan	Adj	Dist	Overlap
1027274	15099	BLH-20041116AEG	KGAM	MAPLETON LICENSE OF MERCED, LLC	A	MERCED	CA	LIC	4	214	292	3	23.3	1.4918
567888	67043	BMLH-20010607AAX	KRVR	THRESHOLD COMMUNICATIONS	A	COPPEROPOLIS	CA	LIC	1	489	288	1	74.9	0
1058994	64144	BMLH-20050210ACX	KJZN	WILKS LICENSE COMPANY-FRESNO LLC	B1	SAN JOAQUIN	CA	LIC	25	160	288	1	93.2	0
1614392	86382	BLFT-20140306AAE	K290AG	KNOX, INC.	D	STOCKTON	CA	LIC	0.25	104	290	1	95.2	0
189906	19532	BMLH-19930914KG	KVVF	UNIVISION RADIO LICENSE CORPORATION	B	SANTA CLARA	CA	LIC	50	558	289	0	100.3	0
263269	38455	BLH-19980309KA	KKBZ	LOTUS FRESNO CORP.	B1	AUBERRY	CA	LIC	0.6	1400	286	3	108.3	0
15508	26933	BLH-19791203AF	KMJ-FM	CUMULUS LICENSING LLC	B	FRESNO	CA	LIC	2.4	1425	290	1	108.3	0
705092	142803	BLFT-20031124AAB	K289AJ	LA FAVORITA RADIO NETWORK, INC.	D	WEST POINT	CA	LIC	0.25	1674	289	0	117	0
1575372	88248	BNPFT-20130924AHN	K288GV	THE ASSOCIATION FOR COMMUNITY EDUCATION,	D	SOLEDAD	CA	CP	0.01	960	288	1	122.4	0
1597394	84125	BPFT-20131119ALS	K236AJ	PRUNDALE EDUCATIONAL FOUNDATION FOR CENT	D	SOLEDAD	CA	CP	0.008	954	290	1	122.4	0
259577	54968	BLH-19971222KF	KMJV	WOLFHOUSE RADIO GROUP, INC.	A	SOLEDAD	CA	LIC	4.7	393	292	3	125.5	0
624848	9995	BLH-20021007ABF	KCFA	LA FAVORITA RADIO NETWORK, INC.	B1	ARNOLD	CA	LIC	3.8	2042	291	2	128.1	0
1373396	18860	BMLED-20100617AFZ	KVPW	EDUCATIONAL MEDIA FOUNDATION	B1	KINGSBURG	CA	LIC	16	197	292	3	128.7	0
212150	8082	BLH-19950801KD	KOCN	CC LICENSES, LLC	A	PACIFIC GROVE	CA	LIC	1.8	416	286	3	131.1	0
1507017	164096	BLH-20120710ACV	KMLY	LAZER LICENSES, LLC	A	CARMEL VALLEY	CA	LIC	0.8	1066	290	1	134.9	0
71821	20353	BLH-19840815CB	KNCI	CBS RADIO STATIONS INC.	B	SACRAMENTO	CA	LIC	50	333	286	3	157	0
296555	18510	BLH-6240	KITS	CBS RADIO EAST INC.	B	SAN FRANCISCO	CA	LIC	15	424	287	2	166	0
1438725	35121	BMLH-20110805AAO	KMEL	AMFM BROADCASTING LICENSES, LLC	B	SAN FRANCISCO	CA	LIC	69	446	291	2	166.2	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
77195	52528	BLH-19850326KZ	KHOP	RADIO LICENSE HOLDING CBC, LLC	B	OAKDALE	CA	LIC	29.5	433	236	53	58	43

