

Non-Interference Compliance

Regarding Facility id 152582

Channel 294

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.

Application_id	File Number	Callsign	Contour at Tower	Min. Contour
1448944	BLH20111007ADO	KQEO	68.2	68.2
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				68.2

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 **68.2 dBμ**, this makes the proposed translator's worst-case interfering contour **108.2 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **431.5 m** from the transmit antenna.

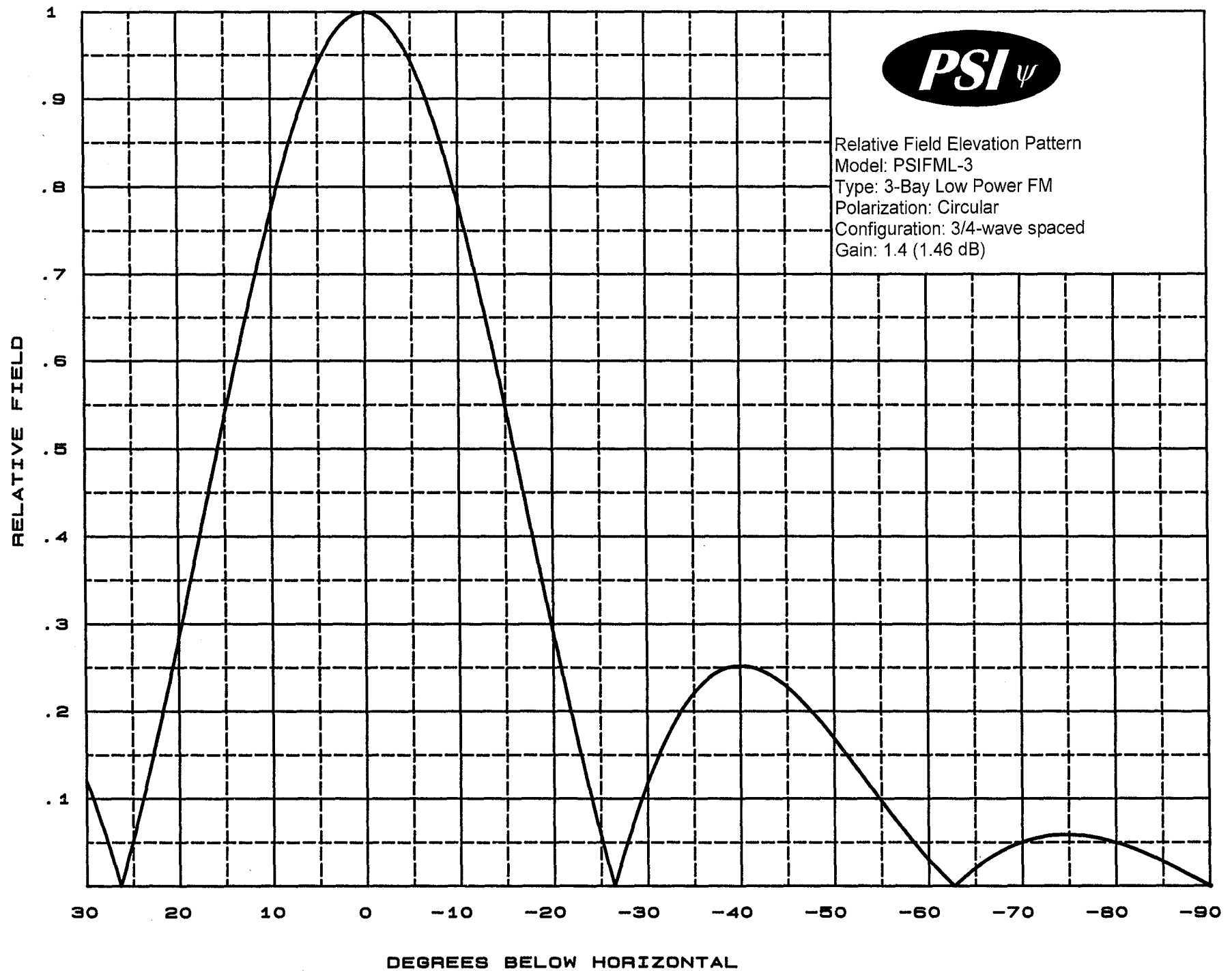
The maximum horizontal plane of the interfering contour was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 7 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative 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 **19.1 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.

Antenna Manufacturer:	PSI
Antenna Model:	FML-3(.75)
CORAGL:	89 m
Maximum ERP:	0.25 kW
Interfering Contour:	108.2 dBμ
Max Int. Contour Distance:	431.5 m
Min Ground Clearance:	19.1 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	.941	221.4	406.0	404.5	53.6
10	.777	150.9	335.3	330.2	30.8
15	.543	73.7	234.3	226.3	28.4
20	.287	20.6	123.8	116.4	46.6
25	.055	0.8	23.7	21.5	79.0
30	.120	3.6	51.8	44.8	63.1
35	.222	12.3	95.8	78.5	34.1
40	.252	15.9	108.7	83.3	19.1
45	.227	12.9	97.9	69.3	19.7
50	.168	7.1	72.5	46.6	33.5
55	.096	2.3	41.4	23.8	55.1
60	.030	0.2	12.9	6.5	77.8
65	.021	0.1	9.1	3.8	80.8
70	.050	0.6	21.6	7.4	68.7
75	.059	0.9	25.5	6.6	64.4
80	.050	0.6	21.6	3.7	67.8
85	.028	0.2	12.1	1.1	77.0
90	.001	0.0	0.4	0.0	88.6
Minimum Clearance above TGL:					19.1 m



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: 152582**

Co-channel through third adjacent:

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Chan	Adj	Dist	Overlap
1448944	87926	BLH-20111007ADO	KQEO	SANDHILL MEDIA CORPORATION	C1	IDAHO FALLS	ID	LIC	100	1789	296	2	55.6	3.8638
1457579	178842	BLFTB-20111109AVG	KQEO-FM1	SANDHILL MEDIA CORPORATION	D	POCATELLO	ID	LIC	2.2	1447	296	2	12.2	3.4622
1295850	150128	BMLFT-20090203ABJ	K294BP	IDAHO WIRELESS CORPORATION	D	IDAHO FALLS	ID	LIC	0.211	1479	294	0	66.9	0
291862	8807	BLFT-145	K296AQ	CARIBOU COUNTY TV	D	SODA SPRINGS, E	ID	LIC	0.109	2148	296	2	71	0
299078	8809	BLFT-144	K292AR	CARIBOU COUNTY TV	D	SODA SPRINGS, E	ID	LIC	0.109	2148	292	2	71	0
429141	73616	BLH-19991215ABL	KQEZ	RJ BROADCASTING LS, LLC	C1	SHELLEY	ID	LIC	100	1741	292	2	78.6	0
1560902	12665	BPH-20130626ABK	KGTM	RJ BROADCASTING LS, LLC	C1	REXBURG	ID	CP	100	1741	292	2	78.6	0
1560900	67744	BPH-20130626ABI	KKMV	LEE FAMILY BROADCASTING, INC.	C	RUPERT	ID	CP	60	2550	291	3	118.4	0
211572	56346	BLFT-19950725TE	K297AB	BRIGHAM YOUNG UNIVERSITY - IDAHO	D	BURLEY	ID	LIC	0.133	2506	297	3	118.4	0
1006847	67744	BLH-20040809AAC	KKMV	LEE FAMILY BROADCASTING, INC.	C0	RUPERT	ID	LIC	25	2550	291	3	118.4	0
1451851	21607	BLH-20111018APA	KEGH	SLC DIVESTITURE TRUST II (JIM BURGOYNE,	C1	BRIGHAM CITY	UT	LIC	5.2	2145	295	1	131.5	0
1158028	166021	BLH-20061103AAJ	KYUN	LOCALLY OWNED RADIO, LLC	C	HAILEY	ID	LIC	97	2000	294	0	144.4	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
1145621	22195	BMLH-20060831AAG	KID-FM	RICH BROADCASTING IDAHO LS, LLC	C	IDAHO FALLS	ID	LIC	100	2026	241	53	62.9	33.9





250 yds