

Non-Interference Compliance

Regarding Facility id 147447

Channel 248

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: There are no buildings within the zone of interference taller than 20ft (6.1m). This application proposes 12.7m (41.7ft) 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
299533	BLH4960	WXLP	71.9	71.9
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				71.9

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 **71.9 dBμ**, this makes the proposed translator's worst-case interfering contour **111.9 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **174.6 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 **12.7 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.

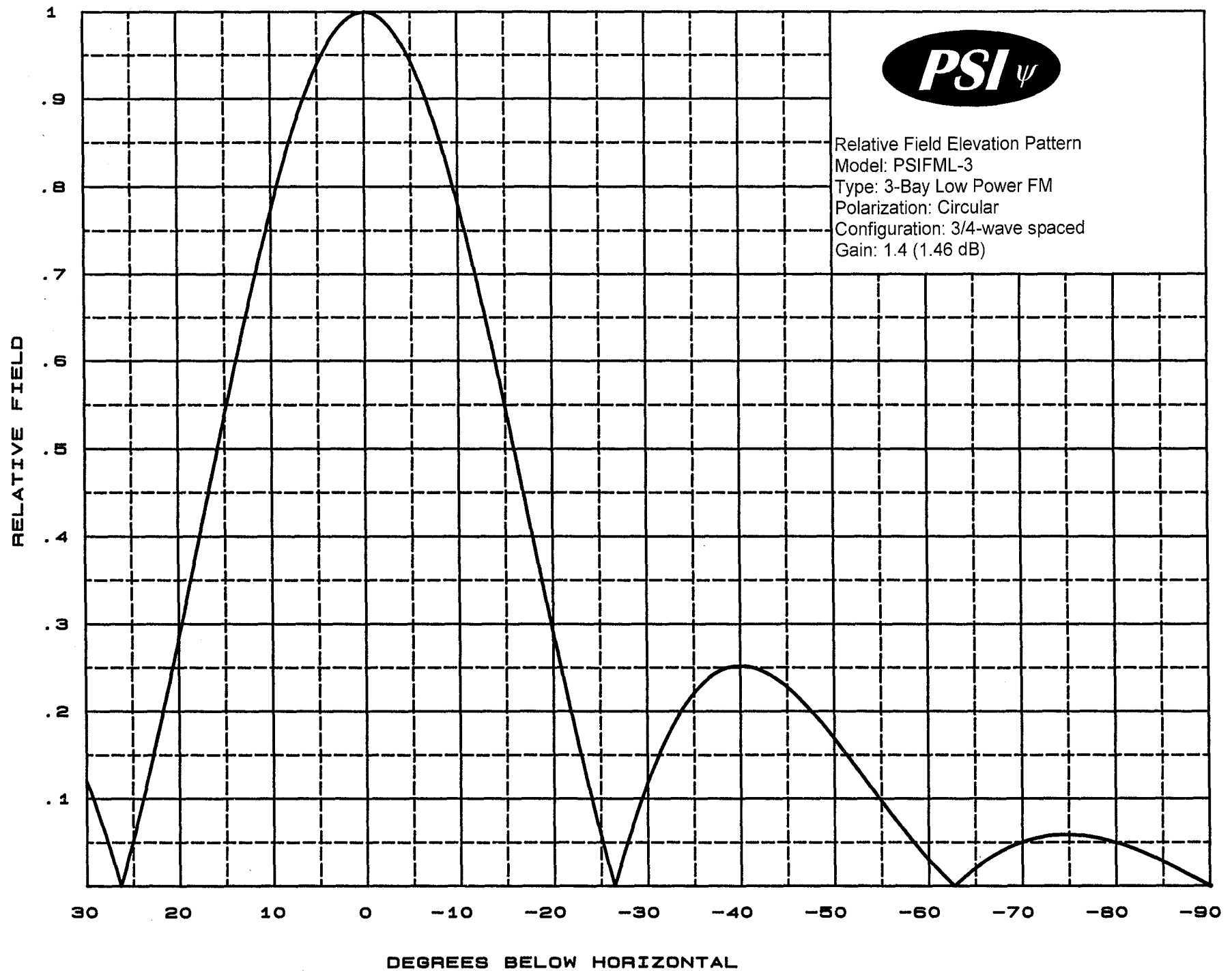
Note: There are no buildings within the zone of interference taller than 20ft (6.1m). This application proposes 12.7m (41.7ft) ground clearance so a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.

Antenna Manufacturer:	PSI
Antenna Model:	FML-3(.75)
CORAGL:	41 m
Maximum ERP:	0.096 kW
Interfering Contour:	111.9 dBμ
Max Int. Contour Distance:	174.6 m
Min Ground Clearance:	12.7 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	85.0	164.3	163.7	26.7
10	.777	58.0	135.7	133.6	17.4
15	.543	28.3	94.8	91.6	16.5
20	.287	7.9	50.1	47.1	23.9
25	.055	0.3	9.6	8.7	36.9
30	.120	1.4	21.0	18.1	30.5
35	.222	4.7	38.8	31.8	18.8
40	.252	6.1	44.0	33.7	12.7
45	.227	4.9	39.6	28.0	13.0
50	.168	2.7	29.3	18.9	18.5
55	.096	0.9	16.8	9.6	27.3
60	.030	0.1	5.2	2.6	36.5
65	.021	0.0	3.7	1.5	37.7
70	.050	0.2	8.7	3.0	32.8
75	.059	0.3	10.3	2.7	31.0
80	.050	0.2	8.7	1.5	32.4
85	.028	0.1	4.9	0.4	36.1
90	.001	0.0	0.2	0.0	40.8
Minimum Clearance above TGL:					12.7 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: 147447**

Co-channel through third adjacent:

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Chan	Adj	Dist	Overlap
299533	13663	BLH-4960	WXLN	CUMULUS LICENSING LLC	B	MOLINE	IL	LIC	50	374	245	3	30.4	2.2806
634528	142584	BNPFT-20030311APD	NEW	AMERICAN FAMILY ASSOCIATION	D	MOLINE	IL	APP	0.055	158	250	2	12.8	0
634436	142527	BNPFT-20030311AND	NEW	STARBOARD MEDIA FOUNDATION, INC.	D	DAVENPORT	IA	APP	0.25	277	250	2	13	0
631395	140129	BNPFT-20030314BRF	NEW	ILLINOIS BIBLE INSTITUTE, INC.	D	BETTENDORF	IA	APP	0.115	330	250	2	18	0
1547282	140051	BNPFT-20130325AJB	K250BD	CITICASTERS LICENSES, L.P.	D	STOCKTOWN	IA	CP	0.25	225	250	2	40	0
1160490	143206	BLFT-20061116AED	K249DO	EDUCATIONAL MEDIA FOUNDATION	D	CLINTON	IA	LIC	0.17	302	249	1	48	0
156320	33711	BLH-19910118KB	WMOI	WPW BROADCASTING, INC.	A	MONMOUTH	IL	LIC	3.4	356	249	1	71.8	0
649751	156462	BNPFT-20030317HOX	NEW	E-STRING WIRELESS, LTD	D	IOWA CITY	IA	APP	0.25	296	247	1	76	0
636837	144519	BNPFT-20030314CCW	NEW	UNIVERSITY OF NORTHERN IOWA	D	IOWA CITY	IA	APP	0.25	238	247	1	76.2	0
634455	142540	BNPFT-20030311ANL	NEW	STARBOARD MEDIA FOUNDATION, INC.	D	IOWA CITY	IA	APP	0.25	300	247	1	77.9	0
13187	54163	BLH-19790823AG	KHAK	CUMULUS LICENSING LLC	C1	CEDAR RAPIDS	IA	LIC	100	382	251	3	92.3	0
1334948	26898	BLH-20090924AAS	KGRR	RADIO DUBUQUE, INC.	C3	EPWORTH	IA	LIC	25	381	247	1	103.3	0
174645	74290	BLH-19920618KA	WZOE-FM	WZOE, INC.	A	PRINCETON	IL	LIC	6	287	251	3	105	0
1017621	89613	BLH-20041004AAP	KHDK	PRITCHARD BROADCASTING CORPORATION	A	NEW LONDON	IA	LIC	3.8	332	247	1	106.3	0
189031	72080	BLH-19930812KD	WFYR	RADIO LICENSE HOLDING CBC, LLC	B1	ELMWOOD	IL	LIC	23.5	295	247	1	112.6	0
644278	151203	BNPFT-20030317CFW	NEW	RADIO ASSIST MINISTRY, INC.	D	SHOW LOW	AZ	APP	0.015	2385.2	247	1	1875	0
1235791	177829	BNPH-20080225ABD	NEW	WILLIAM KONOPNICKI	C1	MCNARY	AZ	APP	100	2521	249	1	1875	0
1198753	150097	BLFT-20070806AAT	K246BI	RADIO ASSIST MINISTRY, INC.	D	WINSLOW	AZ	LIC	0.025	1483	246	2	1889	0

