

Non-Interference Compliance

Regarding Facility id 152957

Channel 247

Description of Exhibit 12 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 6 include a plot and a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 7 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 8 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.

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
571878	BMLH20010627ABB	WBAQ	67.6	67.5
673377	BMLH20030515ACR	WTCD	74.9	74.7
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				67.5

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 **67.5 dBμ**, this makes the proposed translator's worst-case interfering contour **107.5 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **128.9 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 8 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 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:	ERI
Antenna Model:	100-1
CORAGL:	91 m
Maximum ERP:	0.019 kW
Interfering Contour:	107.5 dBμ
Max Int. Contour Distance:	128.9 m
Min Ground Clearance:	23 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	.997	18.9	128.5	128.1	79.8
10	.987	18.5	127.3	125.3	68.9
15	.970	17.9	125.1	120.8	58.6
20	.947	17.0	122.1	114.7	49.2
25	.918	16.0	118.4	107.3	41.0
30	.883	14.8	113.9	98.6	34.1
35	.842	13.5	108.6	88.9	28.7
40	.796	12.0	102.6	78.6	25.0
45	.744	10.5	95.9	67.8	23.2
50	.688	9.0	88.7	57.0	23.0
55	.627	7.5	80.8	46.4	24.8
60	.563	6.0	72.6	36.3	28.1
65	.495	4.7	63.8	27.0	33.2
70	.425	3.4	54.8	18.7	39.5
75	.352	2.4	45.4	11.7	47.2
80	.278	1.5	35.8	6.2	55.7
85	.202	0.8	26.0	2.3	65.1
90	.126	0.3	16.2	0.0	74.8
Minimum Clearance above TGL:					23 m

***PRELIMINARY SPECIFICATION FOR
ERI 100 CIRCULARLY POLARIZED
FM BROADCAST ANTENNA***

*Prepared For
erii
Channel 201*

May 25, 2006

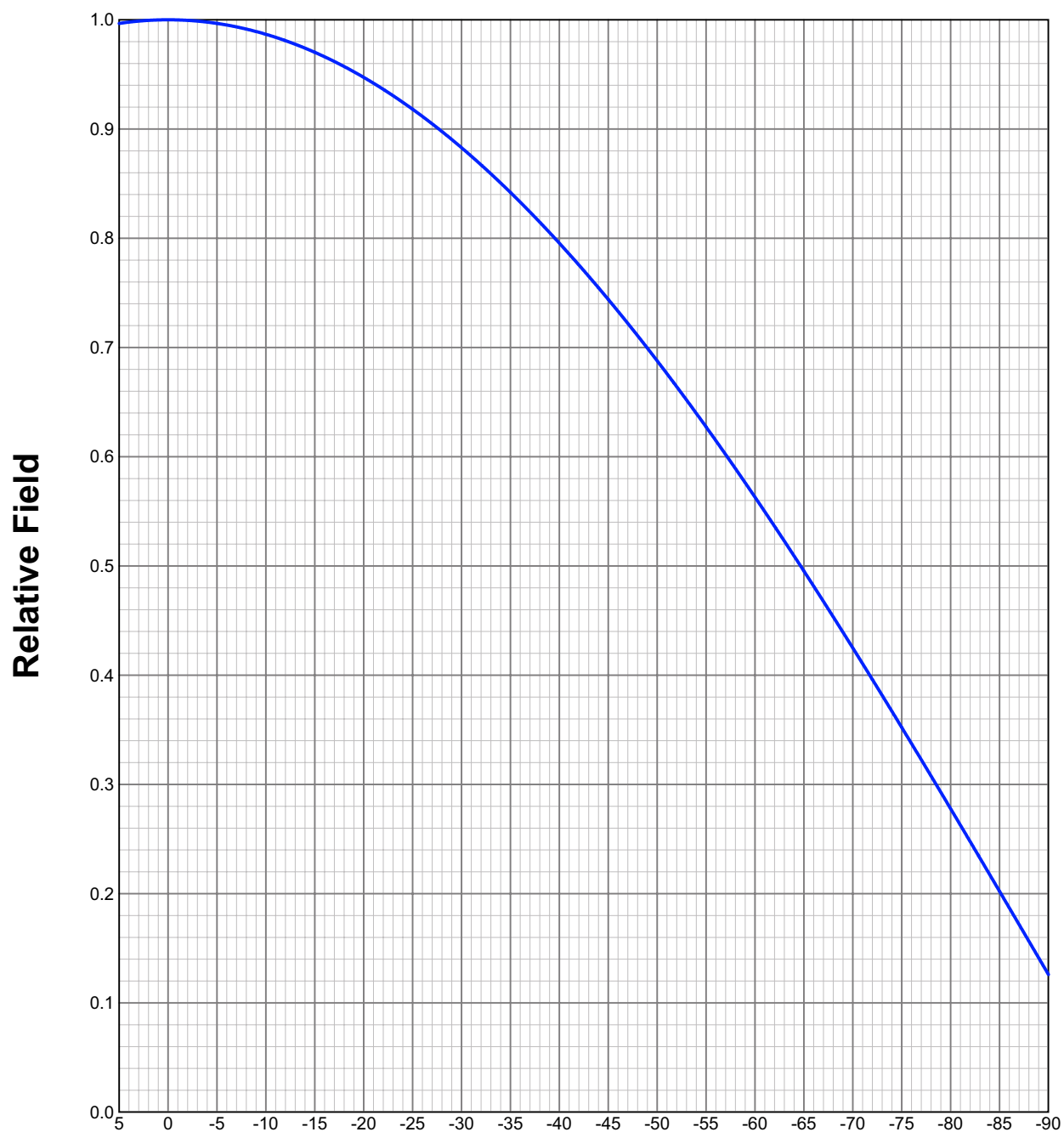
**ANTENNA TYPE:
101-1(F)**

SPECIFICATION NO:



ELEVATION PATTERN

Type:	1001F		Channel:	201
Directivity:	Numeric	dBd	Location:	
Main Lobe:	0.41	-3.82	Beam Tilt:	0.00
Horizontal:	0.41	-3.82	Polarization:	Circular



TABULATED DATA FOR ELEVATION PATTERN

Type: 1001F

Polarization: Circular

ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB					
5.00	0.997	-0.03	-6.75	0.994	-0.05	-27.00	0.905	-0.87	-50.50	0.682	-3.33	-74.00	0.367	-8.71
4.75	0.997	-0.03	-7.00	0.993	-0.06	-27.50	0.901	-0.90	-51.00	0.676	-3.40	-74.50	0.360	-8.88
4.50	0.997	-0.02	-7.25	0.993	-0.06	-28.00	0.898	-0.94	-51.50	0.670	-3.48	-75.00	0.352	-9.06
4.25	0.998	-0.02	-7.50	0.993	-0.07	-28.50	0.894	-0.97	-52.00	0.664	-3.56	-75.50	0.345	-9.25
4.00	0.998	-0.02	-7.75	0.992	-0.07	-29.00	0.890	-1.01	-52.50	0.658	-3.63	-76.00	0.337	-9.44
3.75	0.998	-0.02	-8.00	0.991	-0.07	-29.50	0.887	-1.04	-53.00	0.652	-3.72	-76.50	0.330	-9.63
3.50	0.998	-0.01	-8.25	0.991	-0.08	-30.00	0.883	-1.08	-53.50	0.646	-3.80	-77.00	0.323	-9.83
3.25	0.999	-0.01	-8.50	0.990	-0.08	-30.50	0.879	-1.12	-54.00	0.640	-3.88	-77.50	0.315	-10.03
3.00	0.999	-0.01	-8.75	0.990	-0.09	-31.00	0.875	-1.16	-54.50	0.634	-3.96	-78.00	0.308	-10.24
2.75	0.999	-0.01	-9.00	0.989	-0.09	-31.50	0.871	-1.20	-55.00	0.627	-4.05	-78.50	0.300	-10.45
2.50	0.999	-0.01	-9.25	0.989	-0.10	-32.00	0.867	-1.24	-55.50	0.621	-4.14	-79.00	0.293	-10.67
2.25	0.999	-0.01	-9.50	0.988	-0.10	-32.50	0.863	-1.28	-56.00	0.615	-4.23	-79.50	0.285	-10.89
2.00	0.999	0.00	-9.75	0.987	-0.11	-33.00	0.859	-1.32	-56.50	0.608	-4.32	-80.00	0.278	-11.13
1.75	1.000	0.00	-10.00	0.987	-0.12	-33.50	0.855	-1.36	-57.00	0.602	-4.41	-80.50	0.270	-11.36
1.50	1.000	0.00	-10.50	0.985	-0.13	-34.00	0.851	-1.41	-57.50	0.596	-4.50	-81.00	0.263	-11.61
1.25	1.000	0.00	-11.00	0.984	-0.14	-34.50	0.846	-1.45	-58.00	0.589	-4.60	-81.50	0.255	-11.86
1.00	1.000	0.00	-11.50	0.982	-0.15	-35.00	0.842	-1.49	-58.50	0.583	-4.69	-82.00	0.248	-12.12
0.75	1.000	0.00	-12.00	0.981	-0.17	-35.50	0.838	-1.54	-59.00	0.576	-4.79	-82.50	0.240	-12.39
0.50	1.000	0.00	-12.50	0.979	-0.18	-36.00	0.833	-1.59	-59.50	0.570	-4.89	-83.00	0.233	-12.67
0.25	1.000	0.00	-13.00	0.978	-0.20	-36.50	0.829	-1.63	-60.00	0.563	-4.99	-83.50	0.225	-12.96
0.00	1.000	0.00	-13.50	0.976	-0.21	-37.00	0.824	-1.68	-60.50	0.556	-5.09	-84.00	0.217	-13.26
-0.25	1.000	0.00	-14.00	0.974	-0.23	-37.50	0.819	-1.73	-61.00	0.550	-5.20	-84.50	0.210	-13.57
-0.50	1.000	0.00	-14.50	0.972	-0.25	-38.00	0.815	-1.78	-61.50	0.543	-5.30	-85.00	0.202	-13.89
-0.75	1.000	0.00	-15.00	0.970	-0.26	-38.50	0.810	-1.83	-62.00	0.536	-5.41	-85.50	0.195	-14.22
-1.00	1.000	0.00	-15.50	0.968	-0.28	-39.00	0.805	-1.88	-62.50	0.530	-5.52	-86.00	0.187	-14.56
-1.25	1.000	0.00	-16.00	0.966	-0.30	-39.50	0.800	-1.93	-63.00	0.523	-5.63	-86.50	0.179	-14.93
-1.50	1.000	0.00	-16.50	0.964	-0.32	-40.00	0.796	-1.99	-63.50	0.516	-5.75	-87.00	0.172	-15.30
-1.75	1.000	0.00	-17.00	0.962	-0.34	-40.50	0.791	-2.04	-64.00	0.509	-5.86	-87.50	0.164	-15.70
-2.00	0.999	0.00	-17.50	0.960	-0.36	-41.00	0.786	-2.10	-64.50	0.502	-5.98	-88.00	0.156	-16.11
-2.25	0.999	-0.01	-18.00	0.957	-0.38	-41.50	0.781	-2.15	-65.00	0.495	-6.10	-88.50	0.149	-16.54
-2.50	0.999	-0.01	-18.50	0.955	-0.40	-42.00	0.776	-2.21	-65.50	0.488	-6.22	-89.00	0.141	-17.00
-2.75	0.999	-0.01	-19.00	0.952	-0.42	-42.50	0.770	-2.27	-66.00	0.481	-6.35	-89.50	0.134	-17.48
-3.00	0.999	-0.01	-19.50	0.950	-0.45	-43.00	0.765	-2.32	-66.50	0.475	-6.48	-90.00	0.126	-17.99
-3.25	0.999	-0.01	-20.00	0.947	-0.47	-43.50	0.760	-2.38	-67.00	0.467	-6.60			
-3.50	0.998	-0.01	-20.50	0.945	-0.49	-44.00	0.755	-2.44	-67.50	0.460	-6.74			
-3.75	0.998	-0.02	-21.00	0.942	-0.52	-44.50	0.749	-2.51	-68.00	0.453	-6.87			
-4.00	0.998	-0.02	-21.50	0.939	-0.54	-45.00	0.744	-2.57	-68.50	0.446	-7.01			
-4.25	0.998	-0.02	-22.00	0.936	-0.57	-45.50	0.739	-2.63	-69.00	0.439	-7.15			
-4.50	0.997	-0.02	-22.50	0.933	-0.60	-46.00	0.733	-2.70	-69.50	0.432	-7.29			
-4.75	0.997	-0.03	-23.00	0.931	-0.63	-46.50	0.728	-2.76	-70.00	0.425	-7.43			
-5.00	0.997	-0.03	-23.50	0.928	-0.65	-47.00	0.722	-2.83	-70.50	0.418	-7.58			
-5.25	0.996	-0.03	-24.00	0.924	-0.68	-47.50	0.716	-2.90	-71.00	0.411	-7.73			
-5.50	0.996	-0.04	-24.50	0.921	-0.71	-48.00	0.711	-2.96	-71.50	0.403	-7.89			
-5.75	0.996	-0.04	-25.00	0.918	-0.74	-48.50	0.705	-3.03	-72.00	0.396	-8.04			
-6.00	0.995	-0.04	-25.50	0.915	-0.77	-49.00	0.699	-3.11	-72.50	0.389	-8.21			
-6.25	0.995	-0.05	-26.00	0.912	-0.80	-49.50	0.694	-3.18	-73.00	0.382	-8.37			
-6.50	0.994	-0.05	-26.50	0.908	-0.84	-50.00	0.688	-3.25	-73.50	0.374	-8.54			

Adjacent Channel Study **For Station W247BA, Facility_id: 152957**

Co-channel through third adjacent:

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCMSL	Channel	Adj	Dist	Overlap
673377	60796	BMLH	20030515ACR	WTCD	TELESOUTH COMMUNICATIONS, INC.	C2	INDIANOLA	MS	LIC	40	204	245	2	25.5	0.1134
571878	25229	BMLH	20010627ABB	WBAQ	THE RIVER BROADCASTING CO., INC.	C2	GREENVILLE	MS	LIC	49	187	250	3	37	0.1134
644031	150962	BNPFT	20030317BYQ	NEW	RADIO ASSIST MINISTRY, INC.	D	LAKE VILLAGE	AR	APP	0.205	140.1	247	0	65.5	0
283999	35878	BLH	19990419KD	KWCL-FM	KWCL-FM BROADCASTING COMPANY, INC.	C3	OAK GROVE	LA	LIC	23	131	244	3	96.4	0
249618	14568	BLH	19970710KA	WFMN	WFMN RADIO, INC.	C3	FLORA	MS	LIC	19.5	201	247	0	117.6	0

