

## **Non-Interference Compliance**

Regarding Facility id 150877

Channel 298

### **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 5 include a plot and 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 a high resolution aerial photo of the vicinity surrounding the proposed translator's tower site provided by the U.S. Geological Survey's National Aerial Photography Program. It has been included to provide clarification of the nature of the buildings in the vicinity.

**Note: The USGS Quadrangle and the aerial photo indicate the presence of buildings within the zone of predicted interference, the tallest of which do not exceed 40 ft (12.1m). This proposal provides 20.1m (66 ft) of ground clearance which is more than adequate to clear these buildings; therefore, a lack of population has been demonstrated within the area of interference and this application is 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
1258006	BMPH20080403ABG	WJAM-FM	75.4	75.4
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				<b>75.4</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 **75.4 dBμ**, this makes the proposed translator's worst-case interfering contour **115.4 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **188.4 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 **20.1 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.

**Note: The USGS Quadrangle and the aerial photo indicate the presence of buildings within the zone of predicted interference, the tallest of which do not exceed 40 ft (12.1m). This proposal provides 20.1m (66 ft) of ground clearance which is more than adequate to clear these buildings; therefore, a lack of population has been demonstrated within the area of interference and this application is in full compliance with 47 C.F.R. § 74.1204.**

Antenna Manufacturer:	NIC
Antenna Model:	BKG77-2(.5)
CORAGL:	73 m
Maximum ERP:	0.25 kW
Interfering Contour:	115.4 dBμ
Max Int. Contour Distance:	188.4 m
Min Ground Clearance:	20.1 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	.973	236.7	183.3	182.6	57.0
10	.933	217.6	175.7	173.1	42.5
15	.855	182.8	161.0	155.6	31.3
20	.777	150.9	146.3	137.5	22.9
25	.664	110.2	125.1	113.3	20.1
30	.560	78.4	105.5	91.3	20.3
35	.456	52.0	85.9	70.4	23.7
40	.365	33.3	68.7	52.7	28.8
45	.292	21.3	55.0	38.9	34.1
50	.227	12.9	42.8	27.5	40.2
55	.172	7.4	32.4	18.6	46.5
60	.126	4.0	23.7	11.9	52.4
65	.096	2.3	18.1	7.6	56.6
70	.072	1.3	13.6	4.6	60.3
75	.056	0.8	10.5	2.7	62.8
80	.046	0.5	8.7	1.5	64.5
85	.039	0.4	7.3	0.6	65.7
90	.035	0.3	6.6	0.0	66.4
Minimum Clearance above TGL:					<b>20.1 m</b>

TX station: TV Mondiale

Site name: Monte Alto

Frequency: 100.00 MHz

## Vertical diagram at an azimuth of 0° degrees

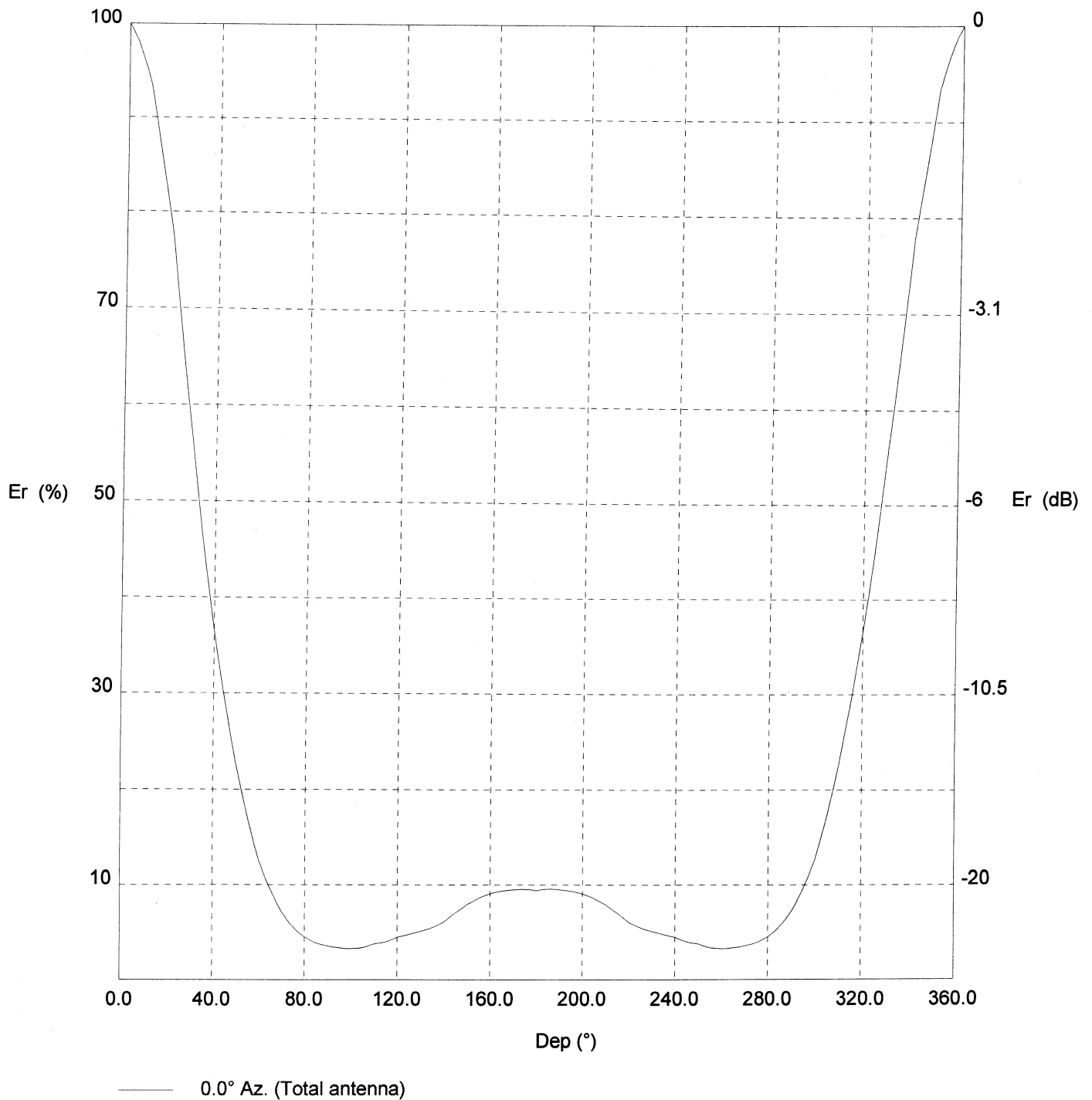
Dep (°)	Er (%)	ERP (KW)	Dep (°)	Er (%)	ERP (KW)	Dep (°)	Er (%)	ERP (KW)
0.0	100.0	8.73	120.0	4.5	0.02	240.0	4.5	0.02
2.0	99.1	8.57	122.0	4.6	0.02	242.0	4.3	0.02
4.0	98.0	8.38	124.0	4.7	0.02	244.0	4.1	0.01
6.0	96.6	8.15	126.0	4.9	0.02	246.0	3.9	0.01
8.0	95.1	7.89	128.0	5.0	0.02	248.0	3.8	0.01
10.0	93.3	7.60	130.0	5.1	0.02	250.0	3.7	0.01
12.0	90.3	7.11	132.0	5.3	0.02	252.0	3.6	0.01
14.0	87.1	6.62	134.0	5.4	0.03	254.0	3.4	0.01
16.0	83.9	6.15	136.0	5.6	0.03	256.0	3.3	0.01
18.0	80.9	5.71	138.0	5.8	0.03	258.0	3.3	0.01
20.0	77.7	5.28	140.0	6.1	0.03	260.0	3.3	0.01
22.0	73.1	4.67	142.0	6.5	0.04	262.0	3.3	0.01
24.0	68.6	4.10	144.0	6.8	0.04	264.0	3.3	0.01
26.0	64.2	3.60	146.0	7.2	0.05	266.0	3.4	0.01
28.0	60.0	3.15	148.0	7.6	0.05	268.0	3.4	0.01
30.0	56.0	2.73	150.0	7.9	0.05	270.0	3.5	0.01
32.0	51.7	2.33	152.0	8.2	0.06	272.0	3.6	0.01
34.0	47.5	1.97	154.0	8.4	0.06	274.0	3.8	0.01
36.0	43.6	1.66	156.0	8.7	0.07	276.0	4.0	0.01
38.0	40.0	1.40	158.0	8.9	0.07	278.0	4.2	0.02
40.0	36.5	1.17	160.0	9.1	0.07	280.0	4.6	0.02
42.0	33.5	0.98	162.0	9.2	0.07	282.0	4.9	0.02
44.0	30.5	0.81	164.0	9.3	0.08	284.0	5.3	0.02
46.0	27.8	0.67	166.0	9.4	0.08	286.0	5.9	0.03
48.0	25.1	0.55	168.0	9.5	0.08	288.0	6.5	0.04
50.0	22.7	0.45	170.0	9.5	0.08	290.0	7.2	0.05
52.0	20.3	0.36	172.0	9.5	0.08	292.0	8.1	0.06
54.0	18.2	0.29	174.0	9.5	0.08	294.0	9.1	0.07
56.0	16.2	0.23	176.0	9.5	0.08	296.0	10.1	0.09
58.0	14.3	0.18	178.0	9.5	0.08	298.0	11.3	0.11
60.0	12.6	0.14	180.0	9.4	0.08	300.0	12.6	0.14
62.0	11.3	0.11	182.0	9.5	0.08	302.0	14.3	0.18
64.0	10.1	0.09	184.0	9.5	0.08	304.0	16.2	0.23
66.0	9.1	0.07	186.0	9.6	0.08	306.0	18.2	0.29
68.0	8.1	0.06	188.0	9.5	0.08	308.0	20.3	0.36
70.0	7.2	0.05	190.0	9.5	0.08	310.0	22.7	0.45
72.0	6.5	0.04	192.0	9.5	0.08	312.0	25.1	0.55
74.0	5.9	0.03	194.0	9.4	0.08	314.0	27.8	0.67
76.0	5.3	0.02	196.0	9.3	0.08	316.0	30.5	0.81
78.0	4.9	0.02	198.0	9.2	0.07	318.0	33.5	0.98
80.0	4.6	0.02	200.0	9.1	0.07	320.0	36.5	1.17
82.0	4.2	0.02	202.0	8.9	0.07	322.0	40.0	1.40
84.0	4.0	0.01	204.0	8.7	0.07	324.0	43.6	1.66
86.0	3.8	0.01	206.0	8.4	0.06	326.0	47.5	1.97
88.0	3.6	0.01	208.0	8.2	0.06	328.0	51.7	2.33
90.0	3.5	0.01	210.0	7.9	0.05	330.0	56.0	2.73
92.0	3.4	0.01	212.0	7.6	0.05	332.0	60.0	3.15
94.0	3.4	0.01	214.0	7.2	0.05	334.0	64.2	3.60
96.0	3.3	0.01	216.0	6.8	0.04	336.0	68.6	4.10
98.0	3.3	0.01	218.0	6.5	0.04	338.0	73.1	4.67
100.0	3.3	0.01	220.0	6.1	0.03	340.0	77.7	5.28
102.0	3.3	0.01	222.0	5.8	0.03	342.0	80.9	5.71
104.0	3.3	0.01	224.0	5.6	0.03	344.0	83.9	6.15
106.0	3.4	0.01	226.0	5.4	0.03	346.0	87.1	6.62
108.0	3.6	0.01	228.0	5.3	0.02	348.0	90.3	7.11
110.0	3.7	0.01	230.0	5.1	0.02	350.0	93.3	7.60
112.0	3.8	0.01	232.0	5.0	0.02	352.0	95.1	7.89
114.0	3.9	0.01	234.0	4.9	0.02	354.0	96.6	8.15
116.0	4.1	0.01	236.0	4.7	0.02	356.0	98.0	8.38
118.0	4.3	0.02	238.0	4.6	0.02	358.0	99.1	8.57

TX station: TV Mondiale

Site name: Monte Alto

Frequency: 100.00 MHz

### Vertical diagram



# **Adjacent Channel Study** **For Station W295BG, Facility\_id: 150877**

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

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Overlap
1258006	59383	BMPH	20080403ABG	WJAM-FM	SCOTT COMMUNICATIONS, INC.	C3	SHORTER	AL	CP MOD	25	170	300	2	18.7	1.4918
1131407	81373	BLFT	20060526ADX	W300AN	BHAGWAN DADLANI	D	MONTGOMERY	AL	LIC	0.038	130	300	2	10.9	0
999717	59383	BLH	20040622ABE	WJAM-FM	SCOTT COMMUNICATIONS, INC.	A	ORRVILLE	AL	LIC	3.7	172	300	2	86.3	0
1201156	157152	BLFT	20070801IHX	W297AO	EDGEWATER BROADCASTING INC.	D	BRENT	AL	LIC	0.006	128	297	1	105	0
1167943	72089	BMLH	20070118ABW	WCGQ	ABG GEORGIA, LLC	C0	COLUMBUS	GA	LIC	100	418	297	1	111	0
282808	30886	BLH	19990315KB	WFXX	JEFFREY K. HAYNES	C2	GEORGIANA	AL	LIC	42	250	299	1	113	0
205805	30281	BLH	19950123KA	WVFG	CHARLES E. JONES, JR.	A	UNIONTOWN	AL	LIC	6	164	298	0	121	0
1006597	5355	BLH	20040722ADV	WBPT	CXR HOLDINGS, L.L.C.	C0	HOMEWOOD	AL	LIC	97	597	295	3	130.3	0
1183224	6401	BLH	20070104ADS	WUHT	CITADEL BROADCASTING COMPANY	C1	BIRMINGHAM	AL	LIC	42	597	299	1	130.3	0

## **Intermediate Frequencies (53 and 54 channels difference):**

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Clr
260293	22877	BLH	19980112KC	WMXA	ROOT COMMUNICATIONS LICENSE COMPANY,	A	OPELIKA	AL	LIC	3.5	316	244	54	83	73





