

Non-Interference Compliance

Regarding Facility id 150122

Channel 300

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.

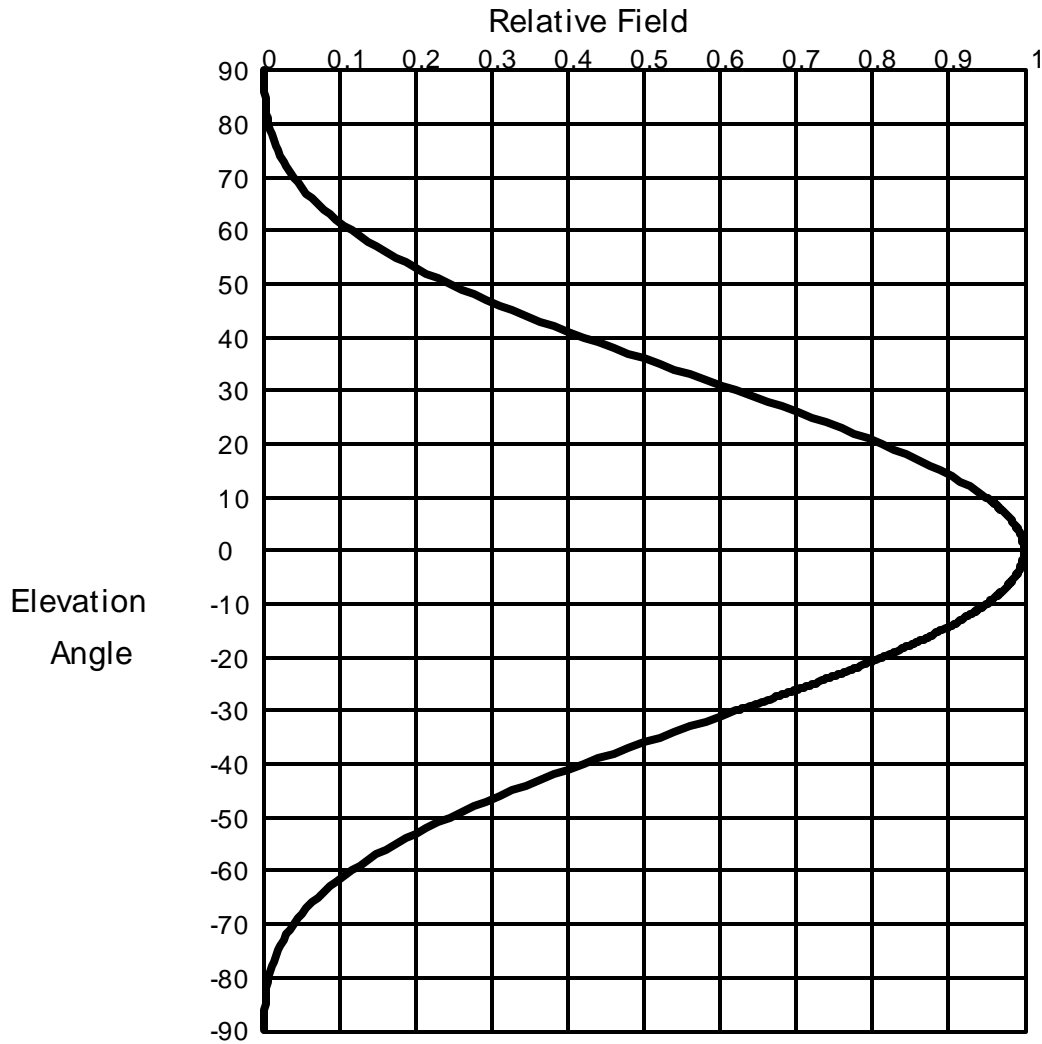
Application_id	File Number	Callsign	Contour at Tower	Min. Contour
1019567	BPH20040603ACK	WJMZ-FM	60.1	60
564769	BMLH20010628AAA	WJMZ-FM	68.7	68.6
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				60

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 **60 dBμ**, this makes the proposed translator's worst-case interfering contour **100 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **221.8 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 **45 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:	SWR
Antenna Model:	2FM1-0.5
CORAGL:	114 m
Maximum ERP:	0.01 kW
Interfering Contour:	100 dBμ
Max Int. Contour Distance:	221.8 m
Min Ground Clearance:	45 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	.987	9.7	218.9	218.1	94.9
10	.950	9.0	210.7	207.5	77.4
15	.890	7.9	197.4	190.7	62.9
20	.812	6.6	180.1	169.3	52.4
25	.721	5.2	159.9	144.9	46.4
30	.622	3.9	138.0	119.5	45.0
35	.520	2.7	115.3	94.5	47.8
40	.420	1.8	93.2	71.4	54.1
45	.327	1.1	72.5	51.3	62.7
50	.244	0.6	54.1	34.8	72.5
55	.173	0.3	38.4	22.0	82.6
60	.115	0.1	25.5	12.8	91.9
65	.070	0.0	15.5	6.6	99.9
70	.039	0.0	8.7	3.0	105.9
75	.018	0.0	4.0	1.0	110.1
80	.006	0.0	1.3	0.2	112.7
85	.001	0.0	0.2	0.0	113.8
90	.000	0.0	0.0	0.0	114.0
Minimum Clearance above TGL:					45 m



Elevation Pattern

Scale: Linear

Units: Field, Relative

Systems With Reliability Inc.

CLIENT: *General*

Date: 11/10/03

ANTENNA TYPE: FM1/2 HWS

FREQUENCY: 98.1

PATTERN POL.: Circular

DIRECTIVITY(Peak): 1.39/ 1.43 dBd

Beam Tilt (Deg.) : 0

DIRECTIVITY(Horiz): 1.39/ 1.43 dBd

Null Fill(s)(%) : 0, 0, 0

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
3.2	.995 (-0.046)	-4.4	.99 (-0.086)	-12.0	.929 (-0.644)
3.0	.995 (-0.04)	-4.6	.989 (-0.094)	-12.2	.926 (-0.666)
2.8	.996 (-0.035)	-4.8	.988 (-0.103)	-12.4	.924 (-0.688)
2.6	.997 (-0.03)	-5.0	.987 (-0.111)	-12.6	.921 (-0.711)
2.4	.997 (-0.026)	-5.2	.986 (-0.121)	-12.8	.919 (-0.733)
2.2	.998 (-0.022)	-5.4	.985 (-0.13)	-13.0	.917 (-0.757)
2.0	.998 (-0.018)	-5.6	.984 (-0.14)	-13.2	.914 (-0.78)
1.8	.998 (-0.014)	-5.8	.983 (-0.15)	-13.4	.912 (-0.804)
1.6	.999 (-0.011)	-6.0	.982 (-0.161)	-13.6	.909 (-0.828)
1.4	.999 (-0.009)	-6.2	.98 (-0.171)	-13.8	.906 (-0.853)
1.2	.999 (-0.006)	-6.4	.979 (-0.183)	-14.0	.904 (-0.878)
1.0	.999 (-0.004)	-6.6	.978 (-0.194)	-14.2	.901 (-0.904)
.8	1.00 (-0.003)	-6.8	.977 (-0.206)	-14.4	.899 (-0.929)
.6	1.00 (-0.002)	-7.0	.975 (-0.219)	-14.6	.896 (-0.956)
.4	1.00 (-0.001)	-7.2	.974 (-0.231)	-14.8	.893 (-0.982)
.2	1.00 (0)	-7.4	.972 (-0.244)	-15.0	.89 (-1.009)
.0	1.00 (0)	-7.6	.971 (-0.258)	-15.2	.888 (-1.036)
-.2	1.00 (0)	-7.8	.969 (-0.272)	-15.4	.885 (-1.064)
-.4	1.00 (-0.001)	-8.0	.968 (-0.286)	-15.6	.882 (-1.092)
-.6	1.00 (-0.002)	-8.2	.966 (-0.3)	-15.8	.879 (-1.12)
-.8	1.00 (-0.003)	-8.4	.964 (-0.315)	-16.0	.876 (-1.149)
-1.0	.999 (-0.004)	-8.6	.963 (-0.33)	-16.2	.873 (-1.178)
-1.2	.999 (-0.006)	-8.8	.961 (-0.346)	-16.4	.87 (-1.208)
-1.4	.999 (-0.009)	-9.0	.959 (-0.362)	-16.6	.867 (-1.238)
-1.6	.999 (-0.011)	-9.2	.957 (-0.378)	-16.8	.864 (-1.268)
-1.8	.998 (-0.014)	-9.4	.956 (-0.395)	-17.0	.861 (-1.299)
-2.0	.998 (-0.018)	-9.6	.954 (-0.412)	-17.2	.858 (-1.33)
-2.2	.998 (-0.022)	-9.8	.952 (-0.429)	-17.4	.855 (-1.361)
-2.4	.997 (-0.026)	-10.0	.95 (-0.447)	-17.6	.852 (-1.393)
-2.6	.997 (-0.03)	-10.2	.948 (-0.465)	-17.8	.849 (-1.425)
-2.8	.996 (-0.035)	-10.4	.946 (-0.483)	-18.0	.846 (-1.457)
-3.0	.995 (-0.04)	-10.6	.944 (-0.502)	-18.2	.842 (-1.49)
-3.2	.995 (-0.046)	-10.8	.942 (-0.521)	-18.4	.839 (-1.524)
-3.4	.994 (-0.052)	-11.0	.94 (-0.541)	-18.6	.836 (-1.557)
-3.6	.993 (-0.058)	-11.2	.937 (-0.561)	-18.8	.833 (-1.591)
-3.8	.993 (-0.064)	-11.4	.935 (-0.581)	-19.0	.829 (-1.626)
-4.0	.992 (-0.071)	-11.6	.933 (-0.602)	-19.2	.826 (-1.661)
-4.2	.991 (-0.079)	-11.8	.931 (-0.623)	-19.4	.823 (-1.696)

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Page 1 of 2

CLIENT: *General*

Date: 11/10/03

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DIRECTIVITY(Peak): 1.39/ 1.43 dBd

Beam Tilt (Deg.) : 0

DIRECTIVITY(Horiz): 1.39/ 1.43 dBd

Null Fill(s)(%) : 0, 0, 0

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
-19.6	.819 (-1.731)	-27.2	.678 (-3.373)	-54.0	.186 (-14.615)
-19.8	.816 (-1.767)	-27.4	.674 (-3.424)	-55.0	.173 (-15.254)
-20.0	.812 (-1.804)	-27.6	.67 (-3.476)	-56.0	.16 (-15.914)
-20.2	.809 (-1.84)	-27.8	.666 (-3.528)	-57.0	.148 (-16.597)
-20.4	.806 (-1.877)	-28.0	.662 (-3.58)	-58.0	.136 (-17.304)
-20.6	.802 (-1.915)	-28.2	.658 (-3.633)	-59.0	.125 (-18.036)
-20.8	.799 (-1.953)	-28.4	.654 (-3.686)	-60.0	.115 (-18.794)
-21.0	.795 (-1.991)	-28.6	.65 (-3.739)	-61.0	.105 (-19.581)
-21.2	.792 (-2.03)	-28.8	.646 (-3.793)	-62.0	.096 (-20.397)
-21.4	.788 (-2.069)	-29.0	.642 (-3.848)	-63.0	.087 (-21.245)
-21.6	.784 (-2.108)	-29.2	.638 (-3.903)	-64.0	.078 (-22.126)
-21.8	.781 (-2.148)	-29.4	.634 (-3.958)	-65.0	.07 (-23.044)
-22.0	.777 (-2.188)	-29.6	.63 (-4.014)	-66.0	.063 (-24)
-22.2	.774 (-2.229)	-29.8	.626 (-4.07)	-67.0	.056 (-24.997)
-22.4	.77 (-2.27)	-30.0	.622 (-4.126)	-68.0	.05 (-26.039)
-22.6	.766 (-2.311)	-31.0	.601 (-4.416)	-69.0	.044 (-27.13)
-22.8	.763 (-2.353)	-32.0	.581 (-4.716)	-70.0	.039 (-28.274)
-23.0	.759 (-2.395)	-33.0	.561 (-5.027)	-71.0	.034 (-29.475)
-23.2	.755 (-2.438)	-34.0	.54 (-5.349)	-72.0	.029 (-30.74)
-23.4	.752 (-2.481)	-35.0	.52 (-5.683)	-73.0	.025 (-32.074)
-23.6	.748 (-2.524)	-36.0	.50 (-6.029)	-74.0	.021 (-33.487)
-23.8	.744 (-2.568)	-37.0	.479 (-6.387)	-75.0	.018 (-34.986)
-24.0	.74 (-2.612)	-38.0	.459 (-6.756)	-76.0	.015 (-36.583)
-24.2	.737 (-2.657)	-39.0	.44 (-7.138)	-77.0	.012 (-38.292)
-24.4	.733 (-2.701)	-40.0	.42 (-7.533)	-78.0	.01 (-40.128)
-24.6	.729 (-2.747)	-41.0	.401 (-7.941)	-79.0	.008 (-42.113)
-24.8	.725 (-2.793)	-42.0	.382 (-8.362)	-80.0	.006 (-44.272)
-25.0	.721 (-2.839)	-43.0	.363 (-8.797)	-81.0	.005 (-46.639)
-25.2	.717 (-2.885)	-44.0	.345 (-9.246)	-82.0	.003 (-49.26)
-25.4	.713 (-2.932)	-45.0	.327 (-9.71)	-83.0	.002 (-52.199)
-25.6	.71 (-2.98)	-46.0	.309 (-10.188)	-84.0	.002 (-55.546)
-25.8	.706 (-3.027)	-47.0	.292 (-10.682)	-85.0	.001 (-59.44)
-26.0	.702 (-3.076)	-48.0	.276 (-11.191)	-86.0	.001 (-64.112)
-26.2	.698 (-3.124)	-49.0	.259 (-11.717)	-87.0	.00 (-69.988)
-26.4	.694 (-3.173)	-50.0	.244 (-12.26)	-88.0	.00 (-78.01)
-26.6	.69 (-3.223)	-51.0	.229 (-12.821)	-89.0	.00 (-91.156)
-26.8	.686 (-3.272)	-52.0	.214 (-13.4)	-90.0	.00 (-50)
-27.0	.682 (-3.323)	-53.0	.20 (-13.998)	90.0	.00 (-50)

Systems With Reliability Inc.

Page 2 of 2

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DIRECTIVITY(Peak): 1.39/ 1.43 dBd

Beam Tilt (Deg.) : 0

DIRECTIVITY(Horiz): 1.39/ 1.43 dBd

Null Fill(s)(%) : 0, 0, 0

Adjacent Channel Study **For Station W300AY, Facility_id: 150122**

Co-channel through third adjacent:

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCMSL	Channel	Adj	Dist	Overlap
564769	1303	BMLH	20010628AAA	WJMZ-FM	CXR HOLDINGS, INC.	C	ANDERSON	SC	LIC	100	544	297	3	53	0.0597
1019567	1303	BPH	20040603ACK	WJMZ-FM	CXR HOLDINGS, L.L.C.	C0	ANDERSON	SC	CP	100	541	297	3	71.6	0.0597
680633	150117	BNPFT	20030821AGT	W300BF	RADIO ASSIST MINISTRY, INC.	D	COMMERCE	GA	CP	0.019	311	300	0	47.5	0
550490	1303	BXMLH	20010131AAU	WJMZ-FM	RADIO ONE LICENSES, INC.	C	ANDERSON	SC	LIC	25.5	439	297	3	53	0
1168751	147389	BMPFT	20070122ADF	W299AT	RADIO TRAINING NETWORK, INC.	D	CORNELIA	GA	CP MOD	0.01	510	299	1	58.3	0
1070830	123738	BLL	20050701AAX	WDRW-LP	CHRISTLIFE COMMUNITY CHURCH	L1	ATHENS	GA	LIC	0	259.6	300	0	59	0
629805	139024	BNPFT	20030310BEL	NEW	CALVARY CHAPEL OF TWIN FALLS, INC.	D	LIBERTY	SC	APP	0.027	353	299	1	59.6	0
649571	156292	BNPFT	20030317KWE	NEW	TABERNACLE BAPTIST COLLEGE	D	PICKENS	SC	APP	0.01	523	299	1	70	0
198516	46967	BLH	19940421KB	WPRW-FM	CUMULUS LICENSING CORP.	C2	MARTINEZ	GA	LIC	24.5	283	299	1	97.6	0

