

Non-Interference Compliance

Regarding Facility id 148547

Channel 273

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.

Page 4 includes a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 5 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 6 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 7 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 buildings depicted in the USGS Quadrangle and the aerial photo are 25 to 30ft in height. This application provides 17.7m (58ft) of ground clearance which is more than enough to provide the necessary clearance for these buildings, 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
552471	BLH20010227AAG	WNUQ	124.3	122
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				122

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 **122 dBμ**, this makes the proposed translator's worst-case interfering contour **162 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **0.6 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 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 **17.7 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: The buildings depicted in the USGS Quadrangle and the aerial photo are 25 to 30ft in height. This application provides 17.7m (58ft) of ground clearance which is more than enough to provide the necessary clearance for these buildings, 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:	NIC
Antenna Model:	BKG77
CORAGL:	18 m
Maximum ERP:	0.12 kW
Interfering Contour:	162 dBμ
Max Int. Contour Distance:	0.6 m
Min Ground Clearance:	17.7 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	.999	119.8	0.6	0.6	17.9
10	.982	115.7	0.6	0.6	17.9
15	.954	109.2	0.6	0.6	17.8
20	.918	101.1	0.6	0.5	17.8
25	.871	91.0	0.5	0.5	17.8
30	.818	80.3	0.5	0.4	17.8
35	.758	68.9	0.5	0.4	17.7
40	.691	57.3	0.4	0.3	17.7
45	.616	45.5	0.4	0.3	17.7
50	.538	34.7	0.3	0.2	17.7
55	.465	25.9	0.3	0.2	17.8
60	.391	18.3	0.2	0.1	17.8
65	.313	11.8	0.2	0.1	17.8
70	.239	6.9	0.1	0.0	17.9
75	.176	3.7	0.1	0.0	17.9
80	.128	2.0	0.1	0.0	17.9
85	.103	1.3	0.1	0.0	17.9
90	.105	1.3	0.1	0.0	17.9
Minimum Clearance above TGL:					17.7 m



BK077

Vertical	-66	0.297	54	0.479	174	0.468
Values	-63	0.345	57	0.436	177	0.479
-180	0.487	-60	0.391	60	0.391	
-177	0.478	-57	0.436	63	0.345	
-174	0.467	-54	0.479	66	0.297	
-171	0.460	-51	0.523	69	0.253	
-168	0.454	-48	0.568	72	0.211	
-165	0.447	-45	0.616	75	0.176	
-162	0.439	-42	0.661	78	0.145	
-159	0.429	-39	0.706	81	0.120	
-156	0.419	-36	0.745	84	0.105	
-153	0.402	-33	0.783	87	0.100	
-150	0.385	-30	0.818	90	0.105	
-147	0.369	-27	0.852	93	0.118	
-144	0.359	-24	0.881	96	0.134	
-141	0.350	-21	0.910	99	0.151	
-138	0.338	-18	0.934	102	0.168	
-135	0.326	-15	0.954	105	0.185	
-132	0.314	-12	0.972	108	0.202	
-129	0.303	-9	0.987	111	0.219	
-126	0.290	-6	0.999	114	0.236	
-123	0.278	-3	0.999	117	0.252	
-120	0.265	0	1.000	120	0.265	
-117	0.251	3	0.999	123	0.278	
-114	0.236	6	0.999	126	0.290	
-111	0.218	9	0.987	129	0.304	
-108	0.202	12	0.972	132	0.314	
-105	0.185	15	0.954	135	0.327	
-102	0.168	18	0.934	138	0.338	
-99	0.151	21	0.910	141	0.350	
-96	0.134	24	0.881	144	0.360	
-93	0.118	27	0.852	147	0.370	
-90	0.105	30	0.818	150	0.386	
-87	0.100	33	0.783	153	0.403	
-84	0.105	36	0.745	156	0.420	
-81	0.120	39	0.706	159	0.430	
-78	0.145	42	0.661	162	0.440	
-75	0.176	45	0.616	165	0.448	
-72	0.211	48	0.568	168	0.455	
-69	0.253	51	0.523	171	0.461	

Better than SWR

Adjacent Channel Study **For Station W273AW, Facility_id: 148547**

Co-channel through third adjacent:

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Overlap
552471	66942	BLH	20010227AAG	WNUQ	THOMAS W. LAWHORNE, SR.	A	SYLVESTER	GA	LIC	6	188	271	2	0.3	0.7161
198693	317	BLEB	19940426KA	WPLH	ABRAHAM BALDWIN AGRICULTURAL COLLEGE	D	TIFTON	GA	LIC	0.029	150	276	3	29.7	0
1040753	124451	BLL	20050118AAA	WJTR-LP	TURNER COUNTY COUNCIL FOR COMMUNITY ED	L1	ASHBURN	GA	LIC	0	172	274	1	30.4	0
247026	5186	BLFT	19970528TF	W273AE	BIBLE BROADCASTING NETWORK, INC.	D	ALBANY	GA	LIC	0.055	121	273	0	35.9	0
1086557	140856	BMPFT	20051003APX	W275AY	DAVID ALLEN TAYLOR	D	NASHVILLE	GA	CP MOD	0.17	101	275	2	62.3	0
1134594	165953	BNPH	20060309ACB	NEW	WORLD RADIO LINK, INC.	A	JACKSONVILLE	GA	APP	6	168	272	1	76.7	0
1113209	165953	BSFH	20050812AUA	NEW	WORLD RADIO LINK, INC.	A	JACKSONVILLE	GA	APP	0	0	272	1	78.8	0
580386	78442	BLH	20011009ABD	WPNG	KM RADIO OF PEARSON, L.L.C.	C3	PEARSON	GA	LIC	12.9	203	270	3	94.8	0
565028	89183	BLH	20010518AAK	WBGE	JOHN H. WIGGINS	A	BAINBRIDGE	GA	LIC	5.3	149	270	3	97.4	0
692116	48644	BLH	20031023ACH	WXHT	MAGNUM BROADCASTING, INC.	C3	MADISON	FL	LIC	19	158	274	1	105.4	0
247357	9312	BLH	19970530KB	WAIB	CATAMOUNT-I COMMUNICATIONS, INC.	C2	TALLAHASSEE	FL	LIC	42	201	276	3	121	0
616294	38640	BLH	20021030ABE	WWLD	CUMULUS LICENSING CORP.	C2	CAIRO	GA	LIC	27	219	272	1	122.7	0
703382	39457	BMLH	20031121AEG	WVRK	CLEAR CHANNEL BROADCASTING LICENSES, INC	C	COLUMBUS	GA	LIC	100	589	275	2	125.6	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
147222	23919	BLEB	19900405KB	WUNV	GEORGIA PUBLIC TELECOMM. COMMISSION	A	ALBANY	GA	LIC	3	174	219	54	26.4	16.4
1077784	93356	BLEB	20050802ABW	WKVH	EDUCATIONAL MEDIA FOUNDATION	C3	MONTICELLO	FL	LIC	1.5	451	220	53	95.8	83.8
282268	92819	BPED	19990224MA	990224MA	AMERICAN FAMILY ASSOCIATION	A	CUTHBERT	GA	APP	6	179	220	53	93.9	83.9



