

[Exhibit 12]

Non-Interference Compliance

Regarding FCC File Number: BNPFT-20030317GUC

Description of Exhibit 12 Contents

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all the applicable rule sections and that this application for a construction permit is in full compliance with 47 CFR 74.1204.

Page 2 of this exhibit is an explanation of the tabulated data, which is included as evidence on page 5 of this exhibit.

Pages 3 and 4 of this exhibit contain an explanation of the method used to demonstrate compliance with contour overlap and interference protection provisions based on 47 CFR 74.1204(d), which states:

"an 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."

In addition, page 4 includes a tabulation of the second and third adjacent stations which this application is required to protect and the field strengths of those stations in the vicinity of the proposed translator. The field strengths given were based on contours predicted using FCC contour algorithms and 3 arc second terrain data.

Let it be noted that should any actual real world interference occur, the applicant certifies that it will promptly suspend operation of this translator in accordance with 47 CFR 74.1203.

Page 5 of this exhibit is the tabulated data from the interference analysis, which shows all stations that this application had to consider for contour protection. These tabulated values were generated using high resolution 3 arc second terrain data for the best possible accuracy.

Page 6 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 min quadrangle at full scale with the calculated area of interference overlayed. 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 a free-space calculation (see FCC 98-117, Appendix A, pg. 41 for reference to the equation used).

Explanation of Frequency Finder Results

The interference analysis for this application was performed using the "Frequency Finder" module in RadioSoft's Comstudy, version 2.2.

Frequency Finder analyzes data taken directly from the FCC's FM database and looks for prohibited overlap with contours of adjacent stations and prohibited proximity to stations 53 or 54 channels from the proposed station (IF) using 3 arc second terrain data and the FCC's contour algorithms. The results tabulated are the stations returned from that analysis. (Note: Because Comstudy was looking at the FCC's FM database, it took into account the proposed translator when doing the analysis and returned it in the tabulated results. For the sake of simplicity, that record has been deleted from all tabulated results.)

The first several columns of the table are self-explanatory. They give various data on the stations in question. The column labeled "Clr" gives the proposed translator's "clearance" with respect to the tabulated station, either in dB or km. The values listed with no units are given in km and are for stations located on an IF to the proposed site's channel.

A negative value in the "Clr" column does NOT necessarily represent prohibited contour overlap, as explained below.

A negative value listed in the "Clr" column would indicate either overlap of interference and protected contours or prohibited proximity to an IF station except in the following situations:

- Since the proposed station's Effective Radiated Power (ERP) is 38 watts, a negative value in km (no units listed in the table) does not represent a violation of the CFR, according to 47 CFR 1204(g), which states that "FM translator stations and booster stations operating with less than 100 watts ERP will be treated as class D stations and will not be subject to intermediate frequency separation requirements."

- A second or third adjacent LP100 station cannot represent a violation of the CFR, as 47 CFR 74.1204(a)(4) requires protection of only co-channel and first adjacent LP100 stations.

- 47 CFR 74.1204(a) requires only the protection of "AUTHORIZED commercial or noncommercial educational FM broadcast stations, FM translators, ..." Any entry with a status listed as "RSV," "USE" or "APP" does not represent an authorized station and therefore is not protected under 47 CFR 74.1204. The one exception is the case of LP100 applications. The note to 47 CFR 74.1204(a)(4) states that "LPFM applications and permits that have not yet been licensed must be considered as operating with the maximum permitted facilities." Therefore, any first adjacent or co-channel LP100 station, no matter the status, is protected.

- Entries highlighted in red are those stations where there is overlap of predicted contours and lack of population has been demonstrated within the area of interference.

Compliance with 47 CFR 74.1204(d)

The proposed translator's Maximum Effective Radiated Power (ERP) is 0.038kW at 63 meters above ground level. According to 47 CFR, 74.1204(a), the desired to undesired ratio between 2nd/3rd adjacent stations is 40dB, making the proposed translator's interfering contour 114.5dBu F(50,10). (See the next page for more discussion on the determination of the signal strength of the proposed translator's area of interference.)

Using a free-space calculation (equation referenced in FCC 98-117, Appendix A, pg. 41), the proposed translator's F(50,10) interference contour was calculated and the maximum horizontal plane was plotted on the pertinent portion of a USGS quadrangle (page 6 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 below 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 (equation referenced in FCC 98-117, Appendix A, pg. 41), the vertical ground clearance of the proposed application's F(50,10) interference contour at each angle has been tabulated. As shown below, the area of interference clears the ground by 20.6 meters 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 proposed area of interference. Hence, in accordance with 47 CFR 74.1204(d) and the clarification provided by the FCC in the decision Re: Living Way Ministries (FCC 02-244), there is a lack of population within the proposed area of interference and therefore this application is in full compliance with 47 CFR 74.1204.

Antenna Manufacturer: SWR

Maximum ERP: 38 watts

Antenna Model Number: FM1

CORAGL: 63 m

F(50,10) Contour: 114.5 dBu

Depression Angle (from COR)	Antenna Relative Field	ERP (watts)	Distance to F(50,10) Interfering Contour from Antenna (m)	Horizontal Distance of F(50,10) Interfering Contour from Tower (m)	Vert. Clearance of F(50,10) Interfering Contour above TGL (m)
5	0.997	37.77	81.2	80.9	55.9
10	0.986	36.94	80.3	79.1	49.1
15	0.969	35.68	78.9	76.2	42.6
20	0.946	34.01	77.1	72.4	36.6
25	0.916	31.88	74.6	67.6	31.5
30	0.879	29.36	71.6	62.0	27.2
35	0.837	26.62	68.2	55.8	23.9
40	0.789	23.66	64.3	49.2	21.7
45	0.736	20.58	59.9	42.4	20.6
50	0.679	17.52	55.3	35.5	20.6
55	0.616	14.42	50.2	28.8	21.9
60	0.55	11.50	44.8	22.4	24.2
65	0.48	8.76	39.1	16.5	27.6
70	0.408	6.33	33.2	11.4	31.8
75	0.333	4.21	27.1	7.0	36.8
80	0.256	2.49	20.9	3.6	42.5
85	0.178	1.20	14.5	1.3	48.6
90	0.1	0.38	8.1	0.0	54.9

Minimum F(50,10) Clearance above TGL **20.6 m**

The F(50,50) signal strength of all relevant second and third adjacent stations have been examined, and are tabulated below. Column three shows the station's signal level at the proposed translator's tower site, and column four gives the minimum value within the entire proposed translator's standard F(50,10) contour (100 dBu for most classes, 94 dBu for class B's, 97 dBu for class B1's). For signal levels too great to determine, 999 was entered. The minimum F(50,50) contour within the proposed translator's standard F(50,10) contour was used to calculate the proposed translator's interference contour, thereby assuring a minimum undesired-to-desired ratio of 40dB for all relevant adjacent stations, as required in 47 CFR, 74.1204(a).

FCC File Number	Call Sign	F(50,50) Contour at Tower	Min. F(50,50) Contour
BLH19971024KA	WKML	74.8dBu	74.5dBu
Minimum F(50,50) Protected Contour of Adjacent Station Within Proposed Application's 100dBu F(50,10) Contour:			74.5dBu

Callsign	State	City	Channel	ERP_w	Licensee	ARN	Class	Status	Distance_km	Clr	Facility_id
WKML	NC	LUMBERTON	239	100000	WKML LICENSE LIMITED PARTNERSHIP	BLH19971024KA	C0	LIC	34.24	-15.24 dB	37252
NEW	NC	LAURINBURG	291	13	FRIENDS OF PUBLIC RADIO, INC.	BNPFT20030314CIQ	D	APP	1.82	1.8	147924
NEW	NC	FAIRMONT	237	19	EDGEWATER BROADCASTING INC.	BNPFT20030317GTO	D	APP	40.48	6.85 dB	147622
NEW	NC	FAYETTEVILLE	237	27	EDUCATIONAL INFORMATION CORPORATION	BNPFT20030314CCC	D	APP	51.84	12.91 dB	145202
WODR	NC	RALEIGH	234	95000	CAROLINA MEDIA GROUP, INC.	BLH19910411KB	C	LIC	129.57	15.36 dB	9076
W237AS	SC	FLORENCE	237	80	QANTUM OF FLORENCE LICENSE COMPANY, LLC	BLFT19940203TD	D	LIC	70.27	15.10 dB	3117
NEW	SC	MARION	237	19	EDGEWATER BROADCASTING INC.	BNPFT20030317IKF	D	APP	65.83	15.91 dB	147999
	SC	FLORENCE	237	0		RM10646	A	APP	66.62	17.85 dB	0
	SC	QUINBY	237	0		RM10713*	A	APP	67.74	18.17 dB	0
WHEZ-LP	SC	HARTSVILLE	237	100	LIGHTHOUSE GOSPEL NETWORK	BNPL20010118AAE	LP100	CP	82.25	20.71 dB	131603
NEW	NC	TABOR CITY	237	13	EDGEWATER BROADCASTING INC.	BNPFT20030317GUX	D	APP	84.95	21.24 dB	147628
WNKS	NC	CHARLOTTE	236	100000	INFINITY RADIO SUBSIDIARY OPERATIONS INC.	BMLH20020321AAN	C	LIC	171.86	25.01 dB	53975
WHPE-FM	NC	HIGH POINT	238	100000	BIBLE BROADCASTING NETWORK, INC.	BLH19880606KB	C1	LIC	140.03	25.28 dB	5164
WNKS	NC	CHARLOTTE	236	100000	INFINITY RADIO SUBSIDIARY OPERATIONS INC.	BLH19890807KD	C	LIC	146.98	27.28 dB	53975
WPCW-LP	SC	CONWAY	237	100	WESTMINSTER PRESBYTERIAN CHURCH	BNPL20010122ADT	LP100	CP	108.13	27.01 dB	131787
NEW	NC	DELCO	237	10	FRIENDS OF PUBLIC RADIO, INC.	BNPFT20030314CII	D	APP	119.67	28.76 dB	147676
WICI-FM	SC	SUMTER	234	8100	MILLER COMMUNICATIONS, INC.	BPH20020619AAU	C3	CP	107.6	29.61 dB	29140
WKML	NC	LUMBERTON	239	0	WKML LICENSE LIMITED PARTNERSHIP		C	USE	34.32	29.40 dB	37252
NEW	SC	NORTH MYRTLE E	237	13	EDGEWATER BROADCASTING INC.	BNPFT20030317LGI	D	APP	119.53	29.08 dB	148211
WVCO	SC	LORIS	235	11000	CAROLINA BEACH MUSIC BROADCASTING CORP.	BLH20021016AAD	C3	LIC	103.83	29.02 dB	57036
WRNS-FM	NC	KINSTON	236	100000	NM LICENSING, LLC	BLH20000531AED	C	LIC	194.04	30.33 dB	36950
WXRC	NC	HICKORY	239	100000	PACIFIC BROADCASTING CROUP, INC	BLH19890616KE	C	LIC	168.46	30.74 dB	51174
NEW	NC	CLAYTON	237	27	RADIO TRAINING NETWORK, INC.	BNPFT20030317JJE	D	APP	129.35	31.30 dB	157001
NEW	NC	SOUTHERN PINES	235	10	FRIENDS OF PUBLIC RADIO, INC.	BNPFT20030314CIX	D	APP	43.64	32.56 dB	148102
NEW	NC	BETHESDA	237	19	RADIO TRAINING NETWORK, INC.	BNPFT20030317JMN	D	APP	142.27	33.75 dB	157011
NEW	NC	HILLSBOROUGH	237	13	RADIO TRAINING NETWORK, INC.	BNPFT20030317JNL	D	APP	145.11	34.52 dB	157022
NEW	NC	SAINT PAULS	290	10	FRIENDS OF PUBLIC RADIO, INC.	BNPFT20030314ATE	D	APP	34.48	34.5	147360
971120TB	NC	HILLSBOROUGH	237	10	CAROLINA CHRISTIAN COMMUNICATIONS	BPFT19971120TB	D	APP	145.14	34.60 dB	89195
WFMV	SC	SOUTH CONGARE	237	6000	GLORY COMMUNICATIONS	BLH20010725AEF	A	LIC	191.67	37.23 dB	24376
W237BA	NC	WAKE FOREST	237	10	RADIO TRAINING NETWORK, INC.	BLFT20001103ABV	D	LIC	159.39	37.23 dB	87686

