

[Exhibit 12]

## **Non-Interference Compliance**

Regarding FCC File Number: BNPFT-20030317ICX

Channel: 275

### **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 19 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 0.019kW at 76 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 106.6dBu 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 45.9 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:** 19 watts

**Antenna Model Number:** 3FM1-0.5

**CORAGL:** 76 m

**F(50,10) Contour:** 106.6 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	0.972	17.95	139.0	138.5	63.9
10	0.891	15.08	127.4	125.5	53.9
15	0.767	11.18	109.7	106.0	47.6
20	0.615	7.19	88.0	82.6	45.9
25	0.452	3.88	64.6	58.6	48.7
30	0.293	1.63	41.9	36.3	55.0
35	0.151	0.43	21.6	17.7	63.6
40	0.035	0.02	5.0	3.8	72.8
45	0.052	0.05	7.4	5.3	70.7
50	0.109	0.23	15.6	10.0	64.1
55	0.141	0.38	20.2	11.6	59.5
60	0.151	0.43	21.6	10.8	57.3
65	0.146	0.41	20.9	8.8	57.1
70	0.131	0.33	18.7	6.4	58.4
75	0.11	0.23	15.7	4.1	60.8
80	0.085	0.14	12.2	2.1	64.0
85	0.059	0.07	8.4	0.7	67.6
90	0.033	0.02	4.7	0.0	71.3

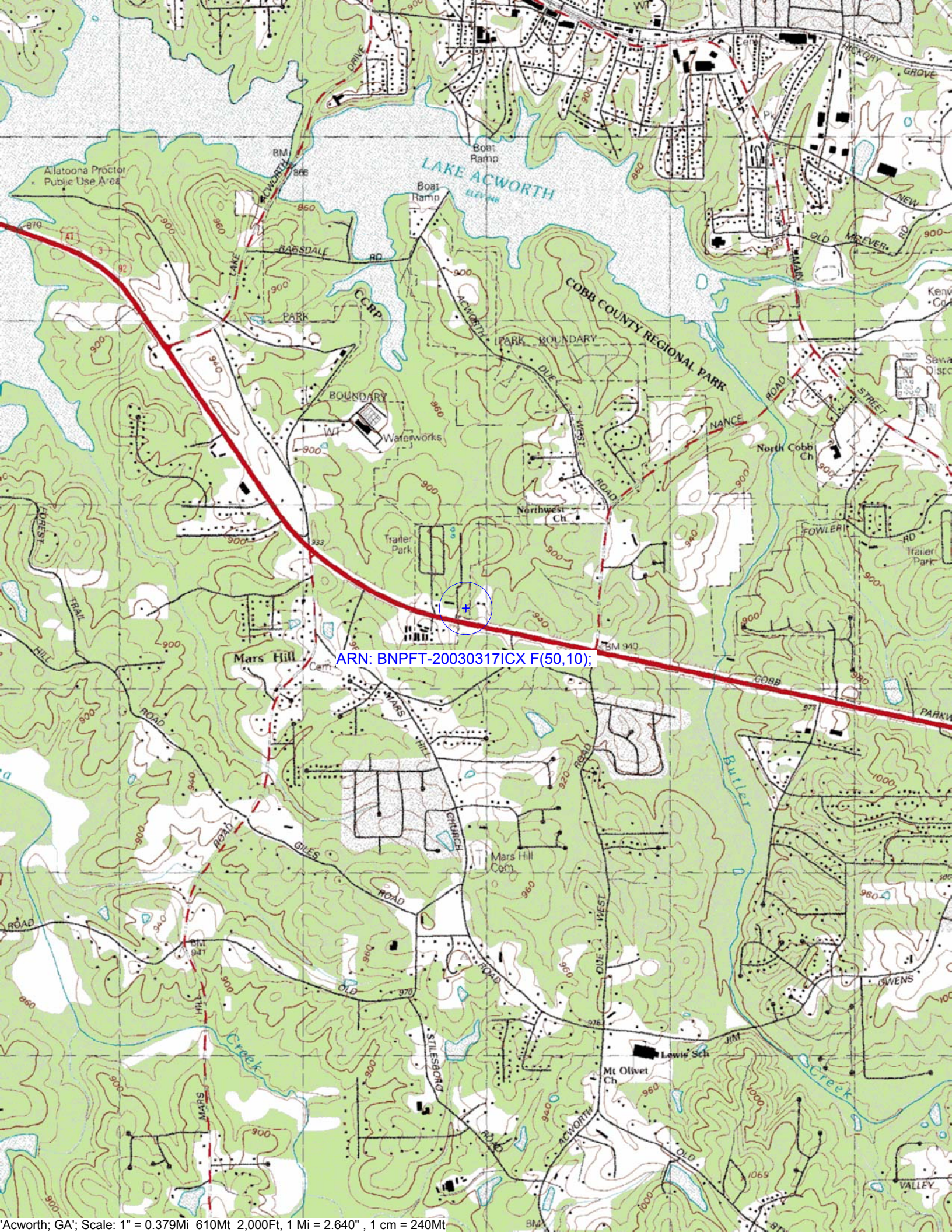
Minimum F(50,10) Clearance above TGL **45.9 m**

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
BLH20000920AAB	WVEE	76.8dBu	76.4dBu
BXPH20020315AAC	WVEE	67dBu	66.6dBu
Minimum F(50,50) Protected Contour of Adjacent Station Within Proposed Translator's standard F(50,10) Contour:			<b>66.6dBu</b>

Callsign	State	City	Channel	ERP_w	Licensee	ARN	Facility_id	Class	Status	Distance_km	Clr
WVEE	GA	ATLANTA	277	100000	INFINITY BROADCASTING OPERATIONS, INC.	BLH20000920AAB	63776	C	LIC	44.55	-14.04 dB
WVEE	GA	ATLANTA	277	8800	INFINITY BROADCASTING OPERATIONS, INC.	BXPH20020315AAC	63776	C	CP	41.07	-4.17 dB
WAMJ	GA	MABLETON	273	3000	NEW MABLETON BROADCASTING CORPORATION	BPH19870707MJ	24562	A	CP	28.56	3.33 dB
NEW	GA	ADAIRSVILLE	275	10	RADIO ASSIST MINISTRY, INC	BNPFT20030317HUQ	148957	D	APP	36.86	4.01 dB
WAMJ	GA	MABLETON	273	3000	NEW MABLETON BROADCASTING CORPORATION	BLH20010906AAH	24562	A	LIC	41.74	6.93 dB
NEW	GA	CANTON	274	10	IMMANUEL BROADCASTING NETWORK	BNPFT20030317EAU	147303	D	APP	30.07	7.00 dB
WAMJ	GA	MABLETON	273	3000	NEW MABLETON BROADCASTING CORPORATION	BXPH20030404AAR	24562	A	CP	41.74	7.26 dB
NEW	GA	ROME	275	10	RADIO ASSIST MINISTRY, INC	BNPFT20030317IEF	148963	D	APP	47.72	9.42 dB
WLOJ-LP	GA	CALHOUN	275	100	GEORGIA-CUMBERLAND ASSOCIATION	BLL20021022AAA	124819	LP100	LIC	57.32	13.60 dB
W222AF	GA	MARIETTA	222	10	IMMANUEL BROADCASTING NETWORK, INC.	BLFT19970707TI	83640	D	LIC	13.34	13.3
WQTU	GA	ROME	272	1100	MCDUGALD BROADCASTING CORPORATION	BMLH20030122ADR	40816	A	LIC	55.04	14.25 dB
WQTU	GA	ROME	272	1000	MCDUGALD BROADCASTING CORPORATION	BXPH20020503AAR	40816	A	CP	55.04	15.05 dB
WLKQ-FM	GA	BUFORD	272	4200	LAKE RADIO, INC.	BPH20000303ACG	36350	A	CP	65.9	18.55 dB
WLKQ-FM	GA	BUFORD	272	4000	LAKE RADIO, INC.	BLH19951019KD	36350	A	LIC	65.9	21.86 dB
NEW	GA	ATLANTA JUNCTION	276	250	JIMMY JARRELL COMMUNICATIONS FOUNDATION, INC	BNPFT20030314CKD	148874	D	APP	50.57	21.49 dB
WMJE	GA	CLARKESVILLE	275	16000	JWJ PROPERTIES, INC.	BLH19920304KC	32978	C3	LIC	108.17	22.33 dB
WCKS	AL	FRUITHURST	274	1650	WCKS, INC.	BLH19940422KA	63409	A	LIC	75.94	22.89 dB
WQTU	GA	ROME	272	0	MCDUGALD BROADCASTING CORPORATION		40816	A	USE	55.04	25.50 dB
870710MD	GA	MABLETON	273	0	BOLTON BROADCASTING, LTD.		6333	A	USE	25.84	25.85 dB
WVRK	GA	COLUMBUS	275	100000	CLEAR CHANNEL BROADCASTING LICENSES, INC.	BLH2614	39457	C	LIC	190.19	27.15 dB
NEW	GA	CANTON	273	90	CHRISTIAN MENTAL HEALTH SERVICES, INC.	BNPFT20030317GLD	156160	D	APP	33.45	29.18 dB
W237AR	NC	HAZELWOOD, ETC.	275	125	WESTERN NORTH CAROLINA PUBLIC RADIO	BMJPFT20030314CIB	71881	D	APP	214.07	30.14 dB
WKXX	AL	ATTALLA	275	1100	BROADCAST MEDIA LLC	BLH19910909KD	957	A	LIC	140.92	30.53 dB
WBDX	GA	TRENTON	274	320	PARTNERS FOR CHRISTIAN RADIO, INC.	BLH19920911KE	54445	A	LIC	112.55	31.87 dB
W221AW	GA	NORTH CANTON	221	10	IMMANUEL BROADCASTING NETWORK, INC.	BLFT19961107TH	28335	D	LIC	31.8	31.8
WLLJ	TN	ETOWAH	276	50000	FRIENDSHIP BROADCASTING LLC.	BLH19890814KF	7932	C2	LIC	157.54	32.32 dB
WMJE	GA	CLARKESVILLE	275	0	JWJ PROPERTIES, INC.		32978	C3	USE	120.48	33.65 dB
WVEE	GA	ATLANTA	277	0	INFINITY BROADCASTING OPERATIONS, INC.		63776	C	USE	44.47	34.98 dB
WELR-FM	AL	ROANOKE	272	8900	EAGLE'S NEST, INC.	BLH19921118KC	18135	C3	LIC	125.73	34.94 dB
	GA	ATLANTA	277	0		RMbg-64	0	C	APP	44.55	34.57 dB
WKXX	AL	ATTALLA	275	0	BROADCAST MEDIA LLC		957	A	USE	130.11	34.22 dB
	GA	ATLANTA	277	0		RMbg-64	0	C0	APP	44.55	34.57 dB
NEW	AL	LINCOLN	275	13	RICHARD C & LISA A GOETZ	BNPFT20030317MQV	158403	D	APP	140.89	35.55 dB
900301MG	AL	FRUITHURST	274	0	D/B/A EVERGREEN COMMUNICATIONS CO.		15033	A	USE	80.09	37.84 dB
WPMA	GA	BUCKHEAD	274	7500	BARINOWSKI INVESTMENT COMPANY, L.P.	BLH20030110ADB	77810	C3	LIC	144.49	37.93 dB
WDXB	AL	JASPER	273	90000	CAPSTAR TX LIMITED PARTNERSHIP	BLH20030207AAP	2114	C1	LIC	213.9	38.59 dB
WGOW-FM	TN	SODDY-DAISY	272	6000	CITADEL BROADCASTING COMPANY	BLH19950519KC	53956	A	LIC	138.01	38.34 dB
WMXS	AL	MONTGOMERY	277	100000	CUMULUS LICENSING CORP.	BLH19890419KB	12322	C	LIC	229.63	39.90 dB





ARN: BNPFT-20030317ICX F(50,10);