

Non-Interference Compliance

Regarding Facility id 147999

Channel 289

Description of Exhibit 13 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 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.

Page 9 of this exhibit is a high resolution aerial photo of the vicinity surrounding the proposed translator's tower site provided by Google Earth. The transmit site and the 110.6 dBμ F(50,10) have been marked on the photograph. It has been included to provide clarification of the nature of the buildings in the vicinity.

Note: The tallest building in the zone of predicted interference is less than 20ft (6.1m). This proposal provides 17.8m (58.4ft) of ground clearance, 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
1212171	BMPH20070119ACY	WNOW-FM	70.6	70.6
1273033	BLH20081014ADN	WOLS	77.2	76.8
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				70.6

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 **70.6 dBμ**, this makes the proposed translator's worst-case interfering contour **110.6 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **327.3 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 **17.8 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 tallest building in the zone of predicted interference is less than 20ft (6.1m). This proposal provides 17.8m (58.4ft) of ground clearance, 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:	JAM
Antenna Model:	JLPC-3(.75)
CORAGL:	67 m
Maximum ERP:	0.25 kW
Interfering Contour:	110.6 dBμ
Max Int. Contour Distance:	327.3 m
Min Ground Clearance:	17.8 m

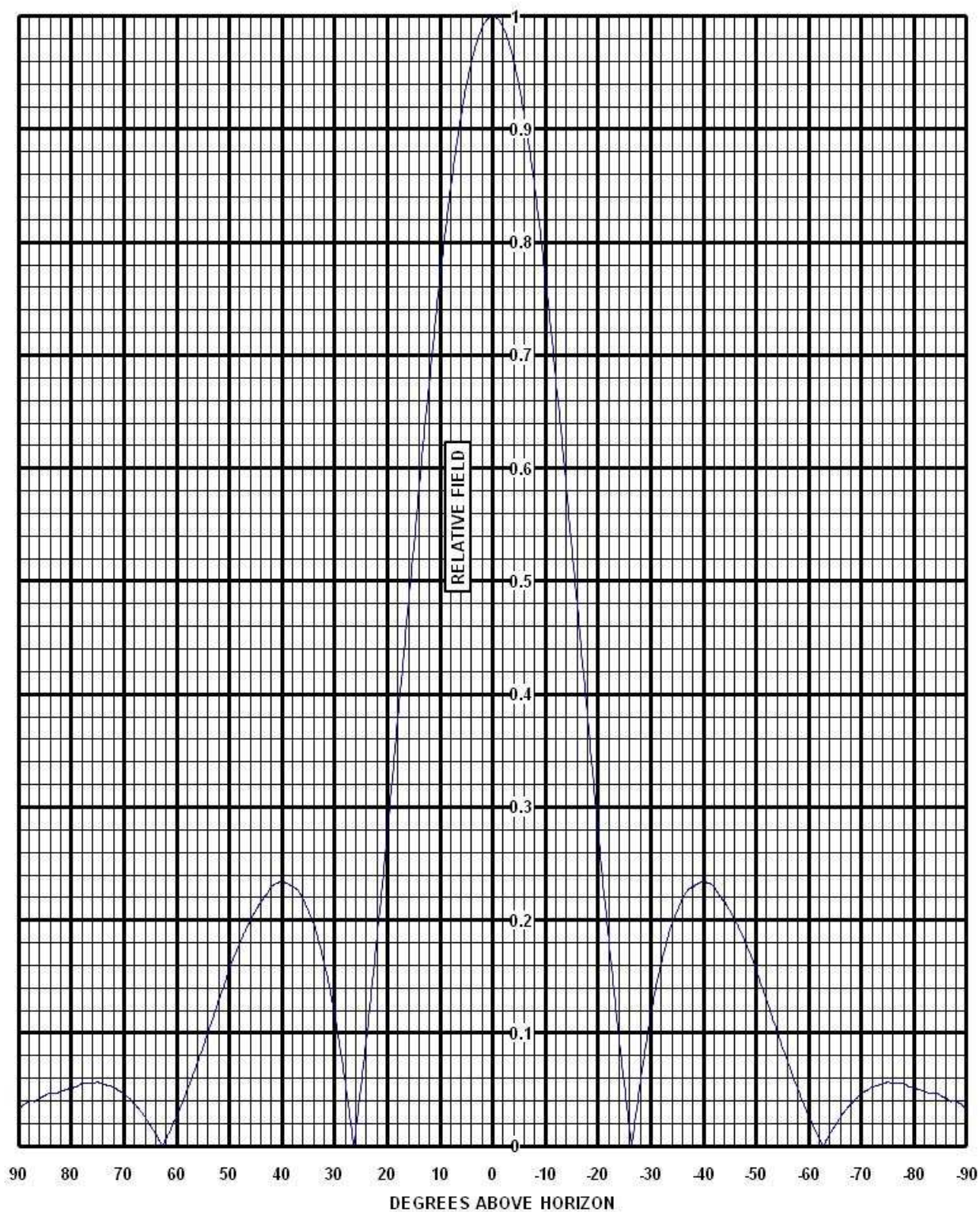
Depression Angle Below Horizontal	Antenna Relative Field	ERP (watts)	Distance to Interfering Contour from Antenna (m)	Horizontal Distance of Interfering Contour from Tower (m)	Vertical Clearance of Interfering Contour above TGL (m)
5	.939	220.4	307.4	306.2	40.2
10	.769	147.8	251.7	247.9	23.3
15	.529	70.0	173.2	167.3	22.2
20	.279	19.5	91.3	85.8	35.8
25	.054	0.7	17.7	16.0	59.5
30	.116	3.4	38.0	32.9	48.0
35	.208	10.8	68.1	55.8	27.9
40	.234	13.7	76.6	58.7	17.8
45	.209	10.9	68.4	48.4	18.6
50	.157	6.2	51.4	33.0	27.6
55	.088	1.9	28.8	16.5	43.4
60	.027	0.2	8.8	4.4	59.3
65	.018	0.1	5.9	2.5	61.7
70	.047	0.6	15.4	5.3	52.5
75	.057	0.8	18.7	4.8	49.0
80	.051	0.7	16.7	2.9	50.6
85	.045	0.5	14.7	1.3	52.3
90	.033	0.3	10.8	0.0	56.2
Minimum Clearance above TGL:					17.8 m



6340 Sky Creek Drive
Sacramento, California 95828 USA

Telephone (916) 383-1177
Fax (916) 383-1182

COMPUTED ELEVATION PATTERN



Customer: WBZK-FM

Frequency: 105.7 MHz

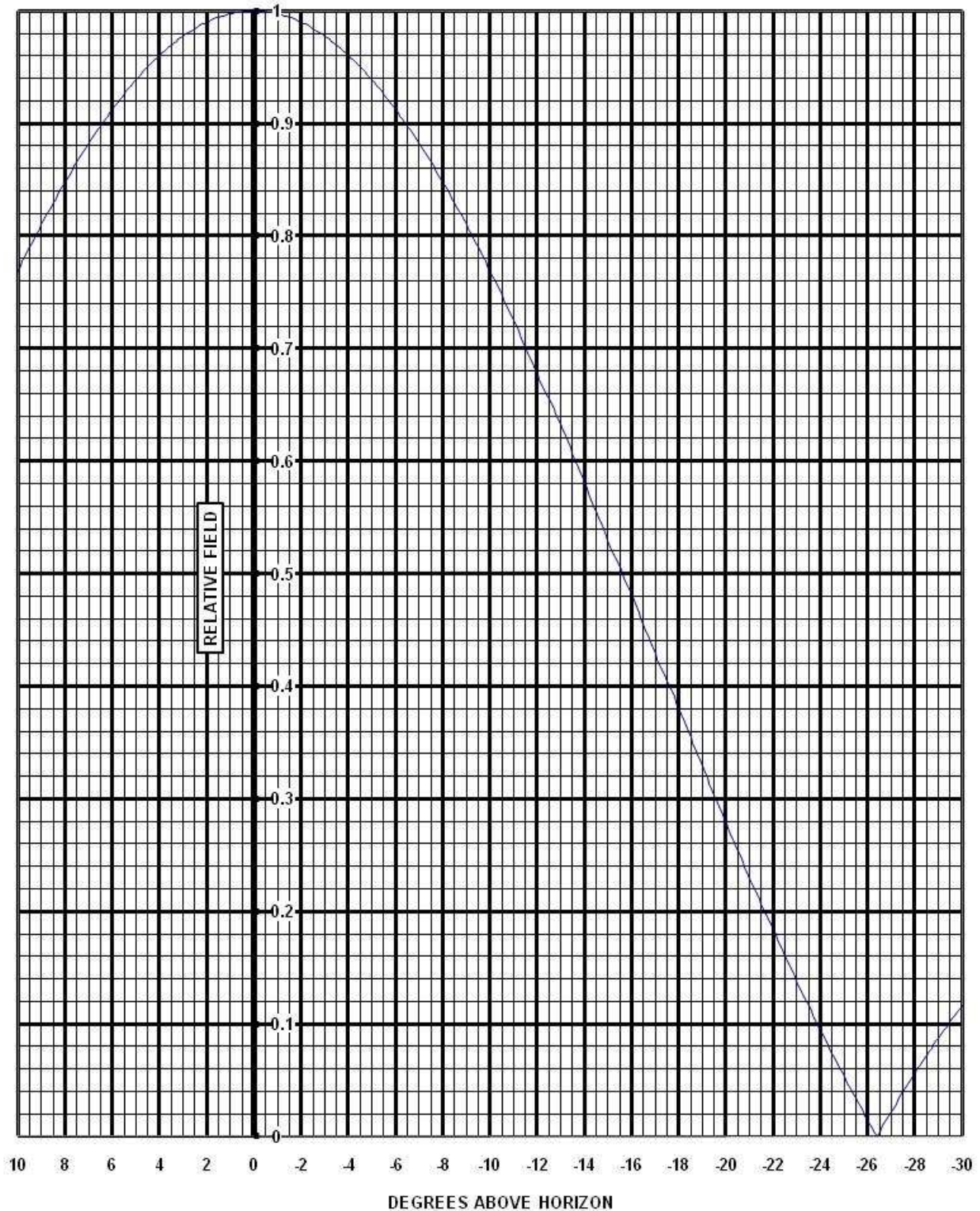
Model: JLPC-3 RFR.75
Description: FM Sidemount Antenna
-0° Beam Tilt, 0% Null Fill



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ELEVATION PATTERN



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Elevation Pattern Tabulation

RELATIVE FIELD VS ELEVATION ANGLE

<u>ELEVATION</u> <u>ANGLE</u>	<u>RELATIVE</u> <u>FIELD</u>	<u>ELEVATION</u> <u>ANGLE</u>	<u>RELATIVE</u> <u>FIELD</u>	<u>ELEVATION</u> <u>ANGLE</u>	<u>RELATIVE</u> <u>FIELD</u>
10	0.769	-26	0.014	-61	0.016
9	0.810	-27	0.022	-62	0.007
8	0.848	-28	0.056	-63	0.002
7	0.882	-29	0.088	-64	0.011
6	0.912	-30	0.116	-65	0.018
5	0.939	-31	0.141	-66	0.026
4	0.960	-32	0.162	-67	0.032
3	0.978	-33	0.181	-68	0.037
2	0.990	-34	0.197	-69	0.042
1	0.997	-35	0.208	-70	0.047
0	1.000	-36	0.219	-71	0.049
-1	0.997	-37	0.227	-72	0.052
-2	0.990	-38	0.229	-73	0.053
-3	0.978	-39	0.233	-74	0.055
-4	0.960	-40	0.234	-75	0.057
-5	0.939	-41	0.233	-76	0.055
-6	0.912	-42	0.230	-77	0.056
-7	0.882	-43	0.222	-78	0.056
-8	0.848	-44	0.216	-79	0.052
-9	0.810	-45	0.209	-80	0.051
-10	0.769	-46	0.200	-81	0.050
-11	0.726	-47	0.191	-82	0.048
-12	0.677	-48	0.180	-83	0.046
-13	0.633	-49	0.169	-84	0.047
-14	0.581	-50	0.157	-85	0.045
-15	0.529	-51	0.142	-86	0.042
-16	0.482	-52	0.130	-87	0.039
-17	0.429	-53	0.115	-88	0.040
-18	0.381	-54	0.102	-89	0.037
-19	0.329	-55	0.088	-90	0.033
-20	0.279	-56	0.075		
-21	0.229	-57	0.062		
-22	0.184	-58	0.050		
-23	0.138	-59	0.038		
-24	0.094	-60	0.027		
-25	0.054				

Customer: WBZK-FM

Frequency: 105.7 MHz

Model: JLPC-3 RFR.75
Description: FM Sidemount Antenna
-0° Beam Tilt, 0% Null Fill

Adjacent Channel Study For Station W289BO, Facility_id: 147999

Co-channel through third adjacent:

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Overlap
1273033	68809	BLH	20081014ADN	WOLS	GHB OF WAXHAW, INC	C2	WAXHAW	NC	LIC	21	358	291	2	20.1	1.4918
1212171	23006	BMPH	20070119ACY	WNOW-FM	GAFFNEY BROADCASTING, INCORPORATED	C1	BESSEMER CITY	NC	CP MOD	49	644	287	2	49.3	1.4918
1313529	23006	BLH	20090521ADJ	WNOW-FM	GAFFNEY BROADCASTING, INCORPORATED	C1	BESSEMER CITY	NC	APP	49	644	287	2	49.3	1.4918
979188	23006	BLH	20040310ABW	WNOW-FM	GAFFNEY BROADCASTING, INCORPORATED	C0	GAFFNEY	SC	LIC	100	693	287	2	87.5	0
631977	140592	BNPFT	20030314BVE	NEW	CAPSTAR TX LIMITED PARTNERSHIP	D	COLUMBIA	SC	APP	0.25	211	290	1	89	0
628626	138384	BNPFT	20030310ACV	NEW	AUGUSTA RADIO FELLOWSHIP INSTITUTE, INC	D	COLUMBIA	SC	APP	0.01	215	287	2	97.4	0
631071	139935	BNPFT	20030314BRS	NEW	CAPSTAR TX LIMITED PARTNERSHIP	D	COLUMBIA	SC	APP	0.013	216	290	1	99.1	0
643371	150417	BNPFT	20030317LDD	NEW	EDGEWATER BROADCASTING, INC.	D	COLUMBIA	SC	APP	0.01	295.9	286	3	99.2	0
632812	141245	BNPFT	20030310AWE	NEW	CALVARY CHAPEL OF TWIN FALLS, INC.	D	OLYMPIA	SC	APP	0.01	245	286	3	99.2	0
634883	142880	BNPFT	20030311AUT	NEW	COMMUNITY PUBLIC RADIO, INC.	D	COLUMBIA	SC	APP	0.027	146	290	1	100.6	0
454545	5188	BLFT	19991214ACN	W290AE	BIBLE BROADCASTING NETWORK, INC.	D	LAURENS	SC	LIC	0.08	253	290	1	103.3	0
640268	147585	BNPFT	20030317AFG	NEW	GLORY COMMUNICATIONS, INC.	D	COLUMBIA	SC	APP	0.25	104	288	1	104.8	0
619288	53623	BLH	20021202AAG	WYRD-FM	ENTERCOM GREENVILLE LICENSE, LLC	C3	SIMPSONVILLE	SC	LIC	25	346	292	3	107.1	0
643375	150421	BNPFT	20030317LGC	NEW	EDGEWATER BROADCASTING, INC.	D	LEXINGTON	SC	APP	0.01	250	286	3	111.8	0
217985	3120	BLH	199601115K	WDAR-FM	QANTUM OF FLORENCE LICENSE COMPANY, L	C3	DARLINGTON	SC	LIC	17	166	288	1	123.6	0
1141935	501	BLH	20060724AEQ	WMKS	CLEAR CHANNEL BROADCASTING LICENSES, I	C1	CLEMMONS	NC	LIC	34	763	289	0	168.3	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
1310719	53975	BXMLH	20090429AAH	WNKS	CBS RADIO HOLDINGS INC.	C	CHARLOTTE	NC	LIC	20	392	236	53	40.5	11.5
132071	53975	BLH	19890807KD	WNKS	CBS RADIO HOLDINGS INC.	C	CHARLOTTE	NC	LIC	100	392	236	53	40.5	11.5
667918	53975	BMLH	20030619AAE	WNKS	CBS RADIO HOLDINGS INC.	C	CHARLOTTE	NC	LIC	100	707	236	53	48.1	19.1



Facility id: 147999;
Area of Interference;

