

[Exhibit 13]

## **Non-Interference Compliance**

Regarding Facility id 203215

Channel 234

### **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.

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 an aerial photo of the vicinity surrounding the proposed translator's tower site.

## 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 dB $\mu$  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.

<u>Application_id</u>	<u>File Number</u>	<u>Callsign</u>	<u>Contour at Tower</u>	<u>Min. Contour</u>
187333	BLH19930616KA	WEMX	68.2	68.2
	Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour			<b>68.2</b>

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 **68.2 dB $\mu$** , this makes the proposed translator's worst-case interfering contour **108.2 dB $\mu$** . By the free-space equation, this contour is calculated to extend a maximum of **431.5 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 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 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 **47.1 m** at the lowest point.

**Note: The tallest buildings within the zone of predicted interference are 30ft (9.1m) in height. This proposal provides 47.1m (154.5ft) ground clearance so, 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.**

<b>Antenna Manufacturer:</b>	<b>PSI</b>
<b>Antenna Model:</b>	<b>FML-2A-DA</b>
<b>CORAGL:</b>	<b>143 m</b>
<b>Maximum ERP:</b>	<b>0.25 kW</b>
<b>Interfering Contour:</b>	<b>108.2 dB<math>\mu</math></b>
<b>Max Int. Contour Distance:</b>	<b>431.5 m</b>
<b>Min Ground Clearance:</b>	<b>47.1 m</b>

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	.980	240.1	422.9	421.3	106.1
10	.900	202.5	388.3	382.4	75.6
15	.790	156.0	340.9	329.3	54.8
20	.650	105.6	280.5	263.6	47.1
25	.490	60.0	211.4	191.6	53.6
30	.330	27.2	142.4	123.3	71.8
35	.180	8.1	77.7	63.6	98.5
40	.040	0.4	17.3	13.2	131.9
45	.070	1.2	30.2	21.4	121.6
50	.150	5.6	64.7	41.6	93.4
55	.200	10.0	86.3	49.5	72.3
60	.230	13.2	99.2	49.6	57.1
65	.230	13.2	99.2	41.9	53.1
70	.210	11.0	90.6	31.0	57.9
75	.170	7.2	73.4	19.0	72.1
80	.120	3.6	51.8	9.0	92.0
85	.060	0.9	25.9	2.3	117.2
90	.000	0.0	0.0	0.0	143.0
Minimum Clearance above TGL:					<b>47.1 m</b>

**Propagation Systems Inc.**  
Elevation Pattern Tabulation  
Antenna: PSIFML-2 Special  
Bay spacing: 3/4 wave

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-90.00	0.001	-60.000	-50.00	0.149	-16.513	-10.00	0.903	-0.883
-89.00	0.012	-38.221	-49.00	0.135	-17.364	-9.00	0.921	-0.713
-88.00	0.025	-32.201	-48.00	0.120	-18.405	-8.00	0.937	-0.561
-87.00	0.037	-28.679	-47.00	0.104	-19.677	-7.00	0.952	-0.429
-86.00	0.049	-26.207	-46.00	0.086	-21.289	-6.00	0.964	-0.315
-85.00	0.061	-24.285	-45.00	0.068	-23.404	-5.00	0.975	-0.219
-84.00	0.073	-22.748	-44.00	0.048	-26.425	-4.00	0.984	-0.139
-83.00	0.085	-21.443	-43.00	0.027	-31.481	-3.00	0.991	-0.079
-82.00	0.096	-20.349	-42.00	0.005	-46.848	-2.00	0.996	-0.036
-81.00	0.107	-19.378	-41.00	0.018	-34.664	-1.00	0.999	-0.009
-80.00	0.118	-18.538	-40.00	0.043	-27.417	0.00	1.000	0.000
-79.00	0.129	-17.792	-39.00	0.068	-23.365	1.00	0.999	-0.009
-78.00	0.139	-17.125	-38.00	0.094	-20.529	2.00	0.996	-0.036
-77.00	0.149	-16.522	-37.00	0.121	-18.329	3.00	0.991	-0.079
-76.00	0.159	-15.984	-36.00	0.149	-16.531	4.00	0.984	-0.139
-75.00	0.168	-15.508	-35.00	0.178	-14.998	5.00	0.975	-0.219
-74.00	0.176	-15.072	-34.00	0.207	-13.669	6.00	0.964	-0.315
-73.00	0.184	-14.685	-33.00	0.237	-12.489	7.00	0.952	-0.429
-72.00	0.192	-14.335	-32.00	0.268	-11.431	8.00	0.937	-0.561
-71.00	0.199	-14.026	-31.00	0.299	-10.475	9.00	0.921	-0.713
-70.00	0.205	-13.752	-30.00	0.331	-9.602	10.00	0.903	-0.882
-69.00	0.211	-13.518	-29.00	0.363	-8.801	11.00	0.884	-1.072
-68.00	0.216	-13.315	-28.00	0.395	-8.061	12.00	0.863	-1.279
-67.00	0.220	-13.146	-27.00	0.428	-7.377	13.00	0.841	-1.508
-66.00	0.224	-13.009	-26.00	0.460	-6.742	14.00	0.817	-1.757
-65.00	0.226	-12.904	-25.00	0.493	-6.151	15.00	0.792	-2.029
-64.00	0.228	-12.834	-24.00	0.525	-5.599	16.00	0.765	-2.322
-63.00	0.229	-12.800	-23.00	0.557	-5.083	17.00	0.738	-2.639
-62.00	0.229	-12.794	-22.00	0.589	-4.603	18.00	0.710	-2.979
-61.00	0.228	-12.829	-21.00	0.620	-4.154	19.00	0.680	-3.344
-60.00	0.227	-12.898	-20.00	0.650	-3.736	20.00	0.650	-3.736
-59.00	0.224	-13.009	-19.00	0.680	-3.344	21.00	0.620	-4.154
-58.00	0.220	-13.158	-18.00	0.710	-2.979	22.00	0.589	-4.603
-57.00	0.215	-13.351	-17.00	0.738	-2.639	23.00	0.557	-5.083
-56.00	0.209	-13.600	-16.00	0.765	-2.323	24.00	0.525	-5.599
-55.00	0.202	-13.894	-15.00	0.792	-2.029	25.00	0.493	-6.151
-54.00	0.194	-14.260	-14.00	0.817	-1.759	26.00	0.460	-6.742
-53.00	0.184	-14.685	-13.00	0.840	-1.510	27.00	0.428	-7.377
-52.00	0.174	-15.192	-12.00	0.863	-1.281	28.00	0.395	-8.061
-51.00	0.162	-15.795	-11.00	0.884	-1.072	29.00	0.363	-8.801
						30.00	0.331	-9.602

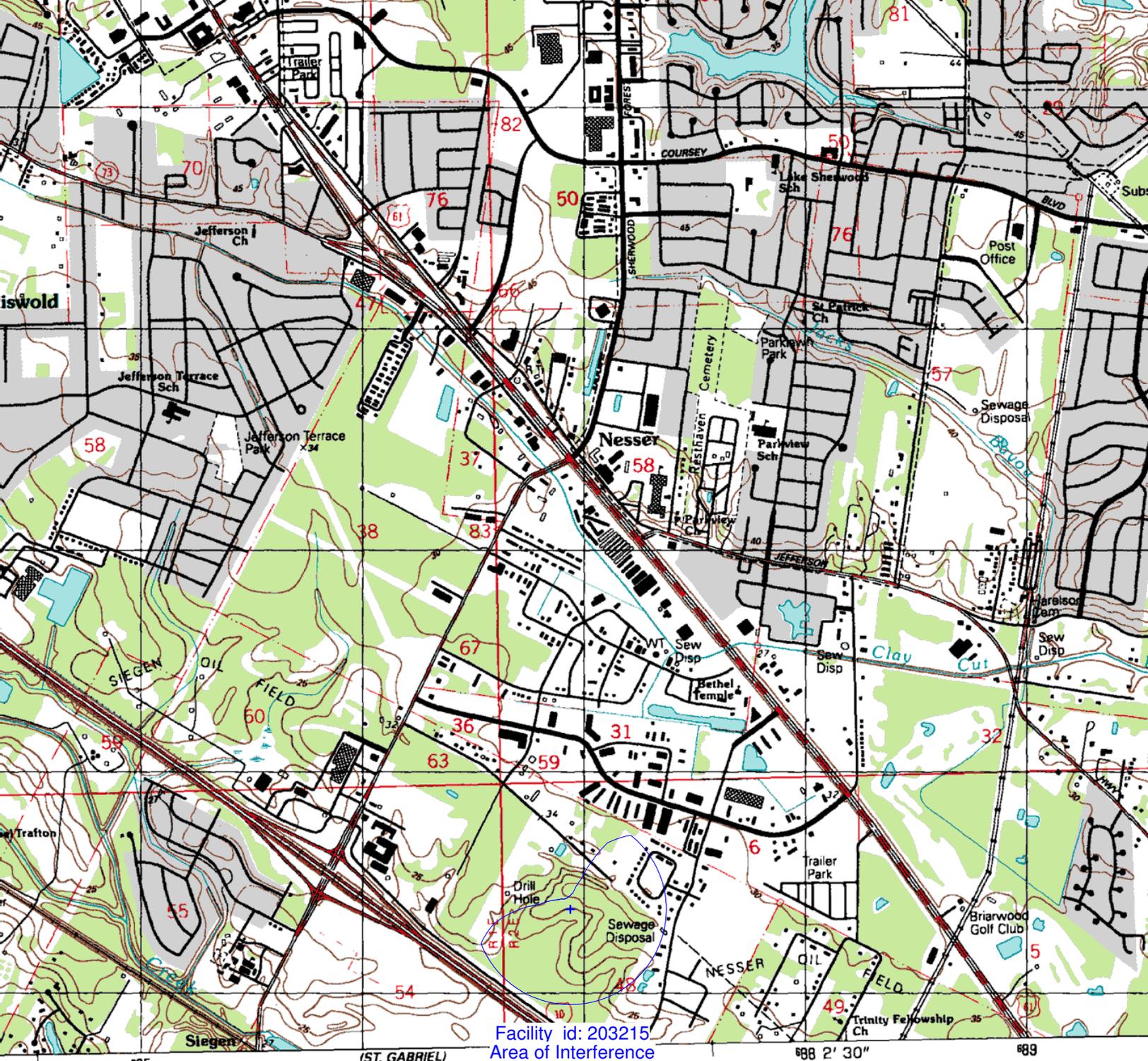
## Adjacent Channel Study For Station W234DH, Facility\_id: 203215

### Co-channel through third adjacent:

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Chan	Adj	Dist	Overlap
187333	58931	BLH-19930616KA	WEMX	RADIO LICENSE HOLDING CBC, L	C1	KENTWOOD	LA	LIC	100	361	231	3	54.9	0.9934
1175775	150763	BLFT-20070308ABD	K237EW	CALVARY CHAPEL OF TWIN FALL	D	PORT ALLEN	LA	LIC	0.25	99	237	3	22.1	0
1761062	141584	BMLFT-20170717ABC	K236BU	PROVIDENCE EDUCATIONAL FOI	D	HAMMOND	LA	LIC	0.055	65	236	2	57.8	0
1176646	70279	BLH-20070314AAC	WGUO	SOUTHEASTERN BROADCASTING	C2	RESERVE	LA	LIC	50	146.9	235	1	78.9	0
215241	64675	BLH-19951011KE	KQKI-FM	TECHE BROADCASTING CORPOF	C3	BAYOU VISTA	LA	LIC	16.5	122	237	3	83.6	0
1738881	195277	BLL-20161027ABI	KECS-LP	PROYECTO HISPANO DE AYUDA	L1	LAFAYETTE	LA	LIC	0	27.5	235	1	92.5	0
1805550	123513	BLL-20190605ACG	KOCZ-LP	SOUTHERN DEVELOPMENT FOU	L1	OPELOUSAS	LA	LIC	0	50.3	235	1	99.8	0
1224123	49247	BLH-20071206ABM	WYLK	NORTH SHORE BROADCASTING	A	LACOMBE	LA	LIC	2.9	153.3	234	0	108.3	0
564136	41057	BMLH-20010509AAG	KSMB	RADIO LICENSE HOLDING CBC, L	C	LAFAYETTE	LA	LIC	100	341	233	1	111.3	0
1003531	21606	BLH-20051019AAX	WQNZ	FIRST NATCHEZ RADIO GROUP II	C1	NATCHEZ	MS	LIC	100	260	236	2	129.9	0
261625	8382	BLH-19980202KD	WTIX-FM	FLEUR DE LIS BROADCASTING, II	C1	GALLIANO	LA	LIC	100	299	232	2	149	0
1232885	63486	BLH-20080212ABV	WZNF	JMD, INC.	C0	LUMBERTON	MS	LIC	100	481.6	237	3	195.7	0

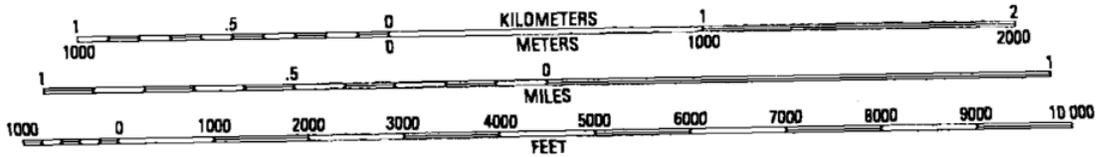
### Intermediate Frequencies (53 and 54 channels difference):

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Clr
1291976	22310	BMLH-20090211AAG	KDDK	RADIO & INVESTMENTS, INC.	A	ADDIS	LA	LIC	6	103	288	54	22.7	12.7



Facility id: 203215  
Area of Interference

SCALE 1:24 000



CONTOUR INTERVAL 5 FEET  
NATIONAL GEODETIC VERTICAL DATUM OF 1929

TO CONVERT FROM METERS TO FEET, MULTIPLY BY 3.2808

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

FOR SALE BY U.S. GEOLOGICAL SURVEY, P.O. BOX 25286, DENVER, COLORADO 80225

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, BATON ROUGE, LOUISIANA 70804

A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



