

## **Non-Interference Compliance**

Regarding Facility id 141125

Channel 224

### **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 5 include a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 6 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 7 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 8 of this exhibit is an aerial photo of the vicinity surrounding the proposed translator's tower site.

**Note: the tallest buildings within the zone of predicted interference are less than 20ft (6.1m) in height. This application provides 18m (59 ft) 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
1484532	BMLH20120314ADS	KEGE	72.6	72.6
1543713	BPH20130304ABO	KEZQ	73.6	73.2
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				<b>72.6</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 **72.6 dBμ**, this makes the proposed translator's worst-case interfering contour **112.6 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **260 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 7 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 **18 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.

**Note: the tallest buildings within the zone of predicted interference are less than 20ft (6.1m) in height. This application provides 18m (59 ft) 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.**

<b>Antenna Manufacturer:</b>	<b>NIC</b>
<b>Antenna Model:</b>	<b>BKG77-2(.5) @ 330°</b>
<b>CORAGL:</b>	<b>91 m</b>
<b>Maximum ERP:</b>	<b>0.25 kW</b>
<b>Interfering Contour:</b>	<b>112.6 dBμ</b>
<b>Max Int. Contour Distance:</b>	<b>260 m</b>
<b>Min Ground Clearance:</b>	<b>18 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	.973	236.7	253.0	252.0	69.0
10	.933	217.6	242.6	238.9	48.9
15	.855	182.8	222.3	214.7	33.5
20	.777	150.9	202.0	189.8	21.9
25	.664	110.2	172.6	156.5	18.0
30	.560	78.4	145.6	126.1	18.2
35	.456	52.0	118.6	97.1	23.0
40	.365	33.3	94.9	72.7	30.0
45	.292	21.3	75.9	53.7	37.3
50	.227	12.9	59.0	37.9	45.8
55	.172	7.4	44.7	25.7	54.4
60	.126	4.0	32.8	16.4	62.6
65	.096	2.3	25.0	10.5	68.4
70	.072	1.3	18.7	6.4	73.4
75	.056	0.8	14.6	3.8	76.9
80	.046	0.5	12.0	2.1	79.2
85	.039	0.4	10.1	0.9	80.9
90	.035	0.3	9.1	0.0	81.9
Minimum Clearance above TGL:					<b>18 m</b>

TX station: TV Mondiale

Site name: Monte Alto

Frequency: 100.00 MHz

## Vertical diagram at an azimuth of 0° degrees

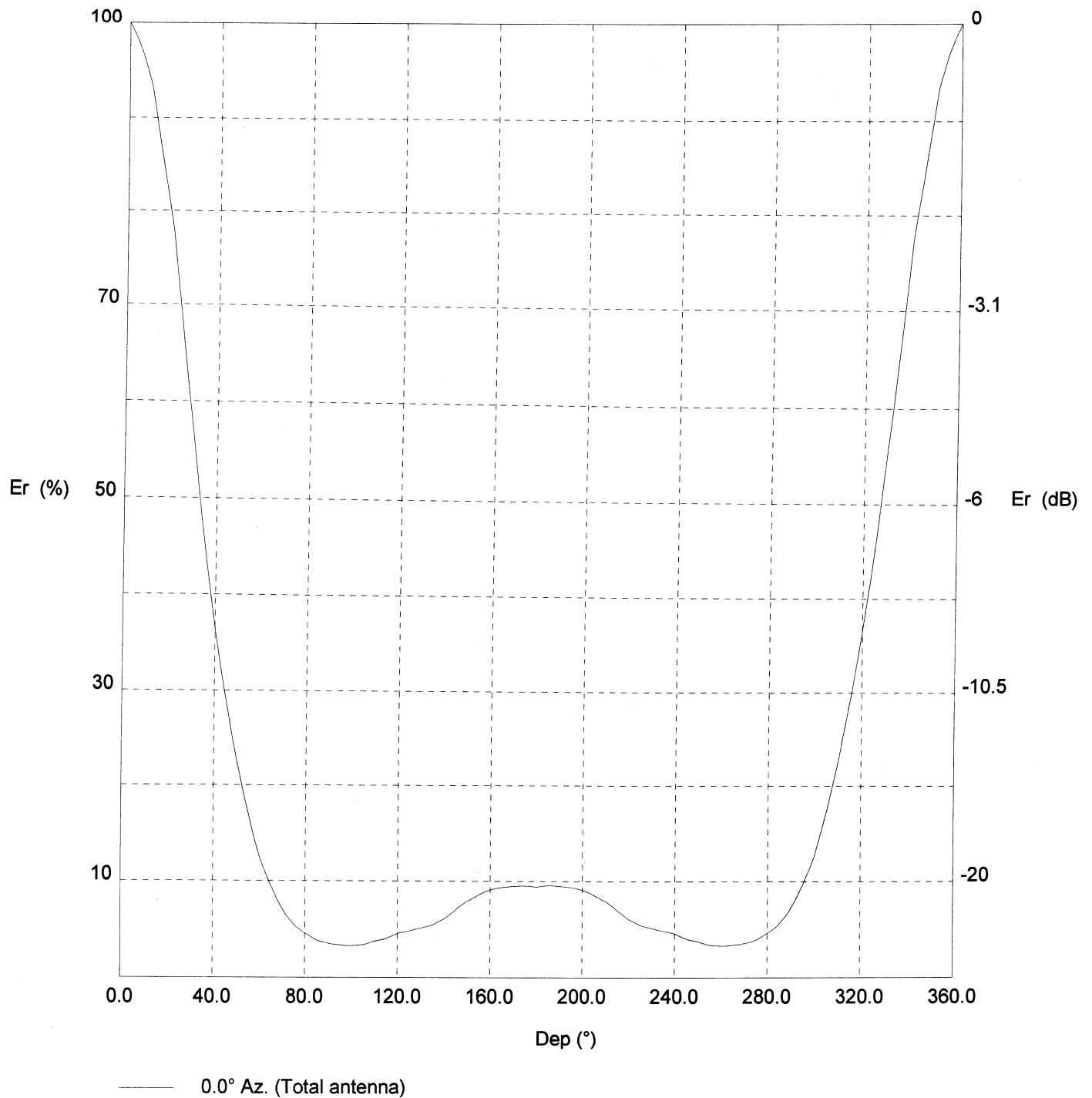
Dep (°)	Er (%)	ERP (KW)	Dep (°)	Er (%)	ERP (KW)	Dep (°)	Er (%)	ERP (KW)
0.0	100.0	8.73	120.0	4.5	0.02	240.0	4.5	0.02
2.0	99.1	8.57	122.0	4.6	0.02	242.0	4.3	0.02
4.0	98.0	8.38	124.0	4.7	0.02	244.0	4.1	0.01
6.0	96.6	8.15	126.0	4.9	0.02	246.0	3.9	0.01
8.0	95.1	7.89	128.0	5.0	0.02	248.0	3.8	0.01
10.0	93.3	7.60	130.0	5.1	0.02	250.0	3.7	0.01
12.0	90.3	7.11	132.0	5.3	0.02	252.0	3.6	0.01
14.0	87.1	6.62	134.0	5.4	0.03	254.0	3.4	0.01
16.0	83.9	6.15	136.0	5.6	0.03	256.0	3.3	0.01
18.0	80.9	5.71	138.0	5.8	0.03	258.0	3.3	0.01
20.0	77.7	5.28	140.0	6.1	0.03	260.0	3.3	0.01
22.0	73.1	4.67	142.0	6.5	0.04	262.0	3.3	0.01
24.0	68.6	4.10	144.0	6.8	0.04	264.0	3.3	0.01
26.0	64.2	3.60	146.0	7.2	0.05	266.0	3.4	0.01
28.0	60.0	3.15	148.0	7.6	0.05	268.0	3.4	0.01
30.0	56.0	2.73	150.0	7.9	0.05	270.0	3.5	0.01
32.0	51.7	2.33	152.0	8.2	0.06	272.0	3.6	0.01
34.0	47.5	1.97	154.0	8.4	0.06	274.0	3.8	0.01
36.0	43.6	1.66	156.0	8.7	0.07	276.0	4.0	0.01
38.0	40.0	1.40	158.0	8.9	0.07	278.0	4.2	0.02
40.0	36.5	1.17	160.0	9.1	0.07	280.0	4.6	0.02
42.0	33.5	0.98	162.0	9.2	0.07	282.0	4.9	0.02
44.0	30.5	0.81	164.0	9.3	0.08	284.0	5.3	0.02
46.0	27.8	0.67	166.0	9.4	0.08	286.0	5.9	0.03
48.0	25.1	0.55	168.0	9.5	0.08	288.0	6.5	0.04
50.0	22.7	0.45	170.0	9.5	0.08	290.0	7.2	0.05
52.0	20.3	0.36	172.0	9.5	0.08	292.0	8.1	0.06
54.0	18.2	0.29	174.0	9.5	0.08	294.0	9.1	0.07
56.0	16.2	0.23	176.0	9.5	0.08	296.0	10.1	0.09
58.0	14.3	0.18	178.0	9.5	0.08	298.0	11.3	0.11
60.0	12.6	0.14	180.0	9.4	0.08	300.0	12.6	0.14
62.0	11.3	0.11	182.0	9.5	0.08	302.0	14.3	0.18
64.0	10.1	0.09	184.0	9.5	0.08	304.0	16.2	0.23
66.0	9.1	0.07	186.0	9.6	0.08	306.0	18.2	0.29
68.0	8.1	0.06	188.0	9.5	0.08	308.0	20.3	0.36
70.0	7.2	0.05	190.0	9.5	0.08	310.0	22.7	0.45
72.0	6.5	0.04	192.0	9.5	0.08	312.0	25.1	0.55
74.0	5.9	0.03	194.0	9.4	0.08	314.0	27.8	0.67
76.0	5.3	0.02	196.0	9.3	0.08	316.0	30.5	0.81
78.0	4.9	0.02	198.0	9.2	0.07	318.0	33.5	0.98
80.0	4.6	0.02	200.0	9.1	0.07	320.0	36.5	1.17
82.0	4.2	0.02	202.0	8.9	0.07	322.0	40.0	1.40
84.0	4.0	0.01	204.0	8.7	0.07	324.0	43.6	1.66
86.0	3.8	0.01	206.0	8.4	0.06	326.0	47.5	1.97
88.0	3.6	0.01	208.0	8.2	0.06	328.0	51.7	2.33
90.0	3.5	0.01	210.0	7.9	0.05	330.0	56.0	2.73
92.0	3.4	0.01	212.0	7.6	0.05	332.0	60.0	3.15
94.0	3.4	0.01	214.0	7.2	0.05	334.0	64.2	3.60
96.0	3.3	0.01	216.0	6.8	0.04	336.0	68.6	4.10
98.0	3.3	0.01	218.0	6.5	0.04	338.0	73.1	4.67
100.0	3.3	0.01	220.0	6.1	0.03	340.0	77.7	5.28
102.0	3.3	0.01	222.0	5.8	0.03	342.0	80.9	5.71
104.0	3.3	0.01	224.0	5.6	0.03	344.0	83.9	6.15
106.0	3.4	0.01	226.0	5.4	0.03	346.0	87.1	6.62
108.0	3.6	0.01	228.0	5.3	0.02	348.0	90.3	7.11
110.0	3.7	0.01	230.0	5.1	0.02	350.0	93.3	7.60
112.0	3.8	0.01	232.0	5.0	0.02	352.0	95.1	7.89
114.0	3.9	0.01	234.0	4.9	0.02	354.0	96.6	8.15
116.0	4.1	0.01	236.0	4.7	0.02	356.0	98.0	8.38
118.0	4.3	0.02	238.0	4.6	0.02	358.0	99.1	8.57

TX station: TV Mondiale

Site name: Monte Alto

Frequency: 100.00 MHz

### Vertical diagram



# **Adjacent Channel Study** **For Station K224EL, Facility\_id: 141125**

## **Co-channel through third adjacent:**

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Chan	Adj	Dist	Overlap
1484532	87656	BMLH-20120314ADS	KEGE	RICH BROADCASTING IDAHO LS, LLC	C2	POCATELLO	ID	LIC	12	1808	221	3	34.7	1.1721
1543713	23306	BPH-20130304ABO	KEZQ	CHAPARRAL BROADCASTING, INC.	C1	IONA	ID	CP	37	2009	226	2	44	1.1721
1372118	148644	BLFT-20100601AEL	K223BU	FRANDSEN MEDIA COMPANY, LLC	D	IDAHO FALLS	ID	LIC	0.099	1754	223	1	35.8	0
1619144	149073	BMPFT-20140110AAQ	K223CK	IDAHO WIRELESS CORPORATION	D	POCATELLO	ID	CP MOD	0.032	1835	223	1	36	0
1579747	145392	BNPFT-20131022ALW	K227CR	TAUNA M. BARBIERI	D	POCATELLO	ID	CP	0.099	1443	227	3	37.2	0
1570779	149089	BNPFT-20130826ABX	K224EK	IDAHO WIRELESS CORPORATION	D	POCATELLO	ID	CP	0.07	1997	224	0	48.4	0
638532	145963	BNPFT-20030314BBM	NEW	TED W. AUSTIN, JR.	D	IDAHO FALLS	ID	APP	0.028	1736	227	3	57.2	0
1572075	145963	BNPFT-20130830ARV	NEW	TED W. AUSTIN, JR.	D	IDAHO FALLS	ID	APP	0.012	1710	224	0	57.2	0
1569972	149098	BNPFT-20130826ABK	K227CL	IDAHO WIRELESS CORPORATION	D	LAVA HOT SPRING	ID	CP	0.25	1912	227	3	68.6	0
1160674	87972	BLH-20060811AWR	KIXM	JACKSON RADIO GROUP, INC.	C3	VICTOR	ID	LIC	0.82	2644	222	2	119.9	0
974139	63832	BLH-20040129AJH	KBLQ-FM	SUN VALLEY RADIO, INCORPORATED	C1	LOGAN	UT	LIC	100	1746	225	1	151.3	0
286538	23306	BLH-19990625KA	KEZQ	CHAPARRAL BROADCASTING, INC.	C	WEST YELLOWSTON	MT	LIC	46	3004	225	1	171.8	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
198481	18116	BLH-19940420KB	KFTZ	RIVERBEND COMMUNICATIONS, LLC	C1	IDAHO FALLS	ID	LIC	100	1801	277	53	35.8	13.8
984582	18118	BLFTB-20040428AAC	KFTZ-FM1	RIVERBEND COMMUNICATIONS, LLC	D	POCATELLO	ID	LIC	2	1438	277	53	36	26





