

Non-Interference Compliance

Regarding Facility id 150326

Channel 286

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: This proposal provides 14m (45.9ft) of ground clearance above the unoccupied buildings at the tower site and above US Highway 131 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
1221526	BLH20071129AJD	WSRW-FM	76.8	76.8
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				76.8

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 **76.8 dBμ**, this makes the proposed translator's worst-case interfering contour **116.8 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **160.3 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 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 **14 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: This proposal provides 14m (45.9ft) of ground clearance above the unoccupied buildings at the tower site and above US Highway 131 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:	NIC
Antenna Model:	BKG77-2(.5)
CORAGL:	59 m
Maximum ERP:	0.25 kW
Interfering Contour:	116.8 dBμ
Max Int. Contour Distance:	160.3 m
Min Ground Clearance:	14 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	.973	236.7	156.0	155.4	45.4
10	.933	217.6	149.6	147.3	33.0
15	.855	182.8	137.1	132.4	23.5
20	.777	150.9	124.6	117.1	16.4
25	.664	110.2	106.4	96.5	14.0
30	.560	78.4	89.8	77.7	14.1
35	.456	52.0	73.1	59.9	17.1
40	.365	33.3	58.5	44.8	21.4
45	.292	21.3	46.8	33.1	25.9
50	.227	12.9	36.4	23.4	31.1
55	.172	7.4	27.6	15.8	36.4
60	.126	4.0	20.2	10.1	41.5
65	.096	2.3	15.4	6.5	45.1
70	.072	1.3	11.5	3.9	48.2
75	.056	0.8	9.0	2.3	50.3
80	.046	0.5	7.4	1.3	51.7
85	.039	0.4	6.3	0.5	52.8
90	.035	0.3	5.6	0.0	53.4
Minimum Clearance above TGL:					14 m

TX station: TV Mondiale

Site name: Monte Alto

Frequency: 100.00 MHz

Vertical diagram at an azimuth of 0° degrees

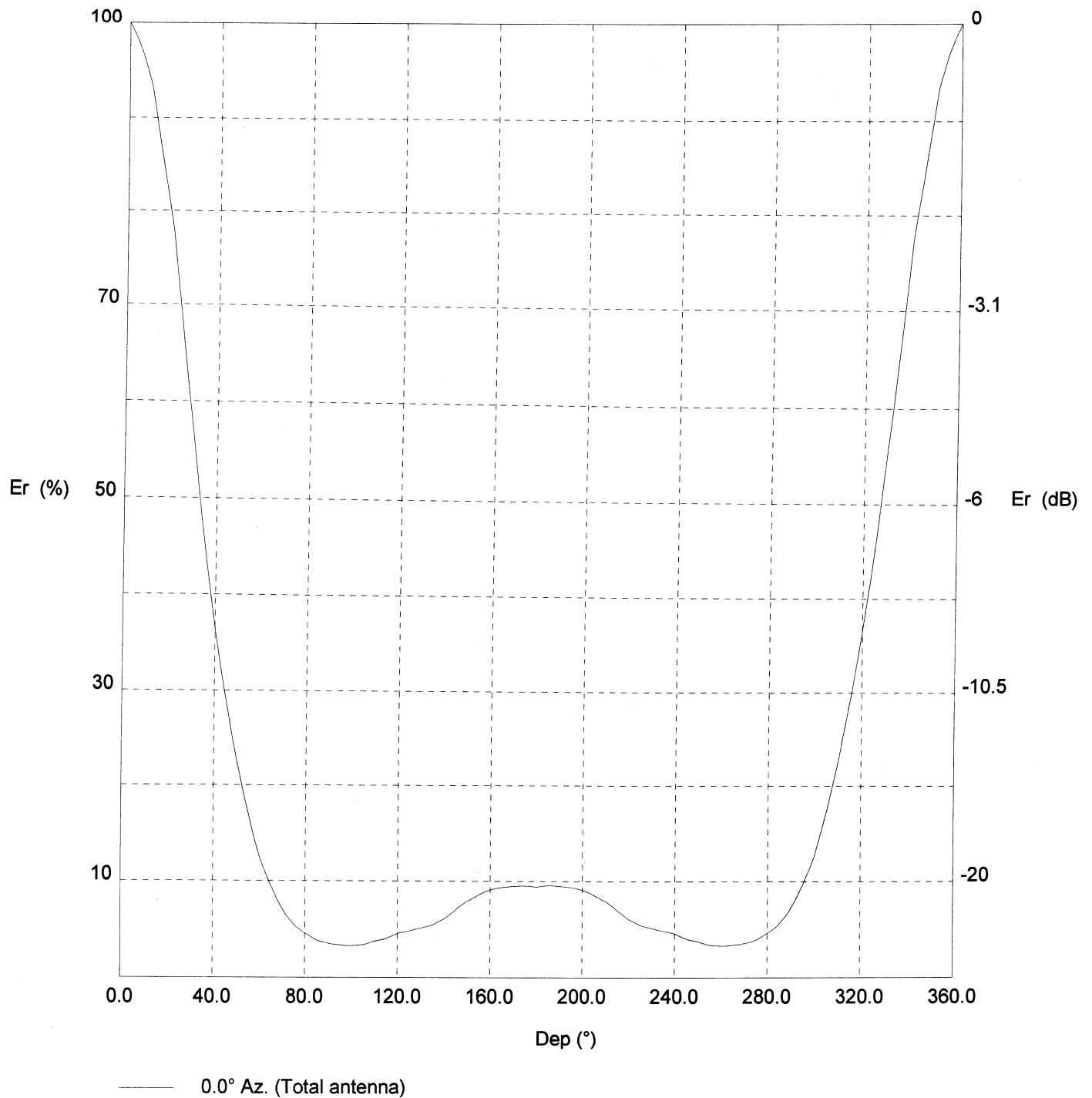
Dep (°)	Er (%)	ERP (KW)	Dep (°)	Er (%)	ERP (KW)	Dep (°)	Er (%)	ERP (KW)
0.0	100.0	8.73	120.0	4.5	0.02	240.0	4.5	0.02
2.0	99.1	8.57	122.0	4.6	0.02	242.0	4.3	0.02
4.0	98.0	8.38	124.0	4.7	0.02	244.0	4.1	0.01
6.0	96.6	8.15	126.0	4.9	0.02	246.0	3.9	0.01
8.0	95.1	7.89	128.0	5.0	0.02	248.0	3.8	0.01
10.0	93.3	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 W286AU, Facility_id: 150326**

Co-channel through third adjacent:

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Overlap
1221526	73605	BLH	20071129AJD	WSRW-FM	CC LICENSES, LLC	B	GRAND RAPIDS	MI	LIC	265	424.4	289	3	38.5	2.8939
1048576	73605	BXLH	20050303ADJ	WSRW-FM	CC LICENSES, LLC	B	GRAND RAPIDS	MI	LIC	99	411	289	3	47	2.8939
296048	73605	Null	Null	WSRW-FM	CC LICENSES, LLC	B	GRAND RAPIDS	MI	USE	0	0	289	3	42.3	0
629162	138605	BNPFT	20030310ATM	NEW	CALVARY CHAPEL OF TWIN FALLS, INC.	D	KENTWOOD	MI	APP	0.01	382	285	1	54	0
295643	37463	Null	Null	WBXX	CUMULUS LICENSING LLC	A	MARSHALL	MI	USE	0	0	285	1	56.4	0
148537	37463	BMLH	19900518KC	WBXX	CUMULUS LICENSING LLC	A	MARSHALL	MI	LIC	6	374	285	1	56.4	0
643695	150639	BNPFT	20030317JEV	NEW	RADIO ASSIST MINISTRY, INC.	D	GRAND RAPIDS	MI	APP	0.01	372	285	1	71.4	0
1108963	126875	BLL	20060118ADK	WVBH-LP	FLATS ECONOMIC DEVELOPMENT CORP.	L1	BENTON HARBOR	MI	LIC	0	209	287	1	71.8	0
288586	14547	Null	Null	820414AG	CROSS COMMUNICATIONS, INC.	A	LAGRANGE	IN	USE	0	0	288	2	76.2	0
711203	36274	BLH	20031222AAB	WTHD	SWICK BROADCASTING COMPANY, INC.	A	LAGRANGE	IN	LIC	2.4	445	288	2	80	0
295521	53639	Null	Null	WFRN-FM	PROGRESSIVE BROADCASTING SYSTEM, INC.	B	ELKHART	IN	USE	0	0	284	2	82.1	0
1037418	53639	BMLH	20041230ACW	WFRN-FM	PROGRESSIVE BROADCASTING SYSTEM, INC.	B	ELKHART	IN	LIC	50	384	284	2	82.2	0
1243275	150311	BLFT	20080414ANX	W287BL	PROGRESSIVE BROADCASTING SYSTEM, INC	D	ELKHART	IN	LIC	0.165	370	287	1	82.2	0
648940	155701	BNPFT	20030317CZZ	NEW	CALVARY CHAPEL OF TWIN FALLS, INC.	D	NUNICA	MI	APP	0.013	315	285	1	90.3	0
404457	77818	BLFT	19990831AAK	W284AH	SPRING ARBOR UNIVERSITY	D	LANSING	MI	LIC	0.25	284	284	2	98.9	0
194485	9247	BLH	19940201KC	WKHM-FM	JACKSON RADIO WORKS, INC.	A	BROOKLYN	MI	LIC	2.2	418	287	1	101.4	0
295456	24644	Null	Null	WSNX-FM	CC LICENSES, LLC	B	MUSKEGON	MI	USE	0	0	283	3	104.5	0
118821	24644	BLH	19880930KC	WSNX-FM	CC LICENSES, LLC	B	MUSKEGON	MI	LIC	32	392	283	3	104.5	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
67517	41678	BLH	19840309AR	WTNR	RADIO LICENSE HOLDING CBC, LLC	B	HOLLAND	MI	LIC	50	353	233	53	66.6	51.6
291440	41678	Null	Null	WTNR	RADIO LICENSE HOLDING CBC, LLC	B	HOLLAND	MI	USE	0	0	233	53	66.6	51.6



Google earth

feet
meters

1000

500

