

Non-Interference Compliance

Regarding Facility id 147460

Channel 292

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

Note: The tallest buildings within the zone of predicted interference are 30ft (9.1m) in height. This application provides 92.3m (302.8ft) 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
1414072	BMLH20101221ACA	KPWR	87.4	87.3
264236	BLH19980324KA	KROQ-FM	82.2	82.2
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				82.2

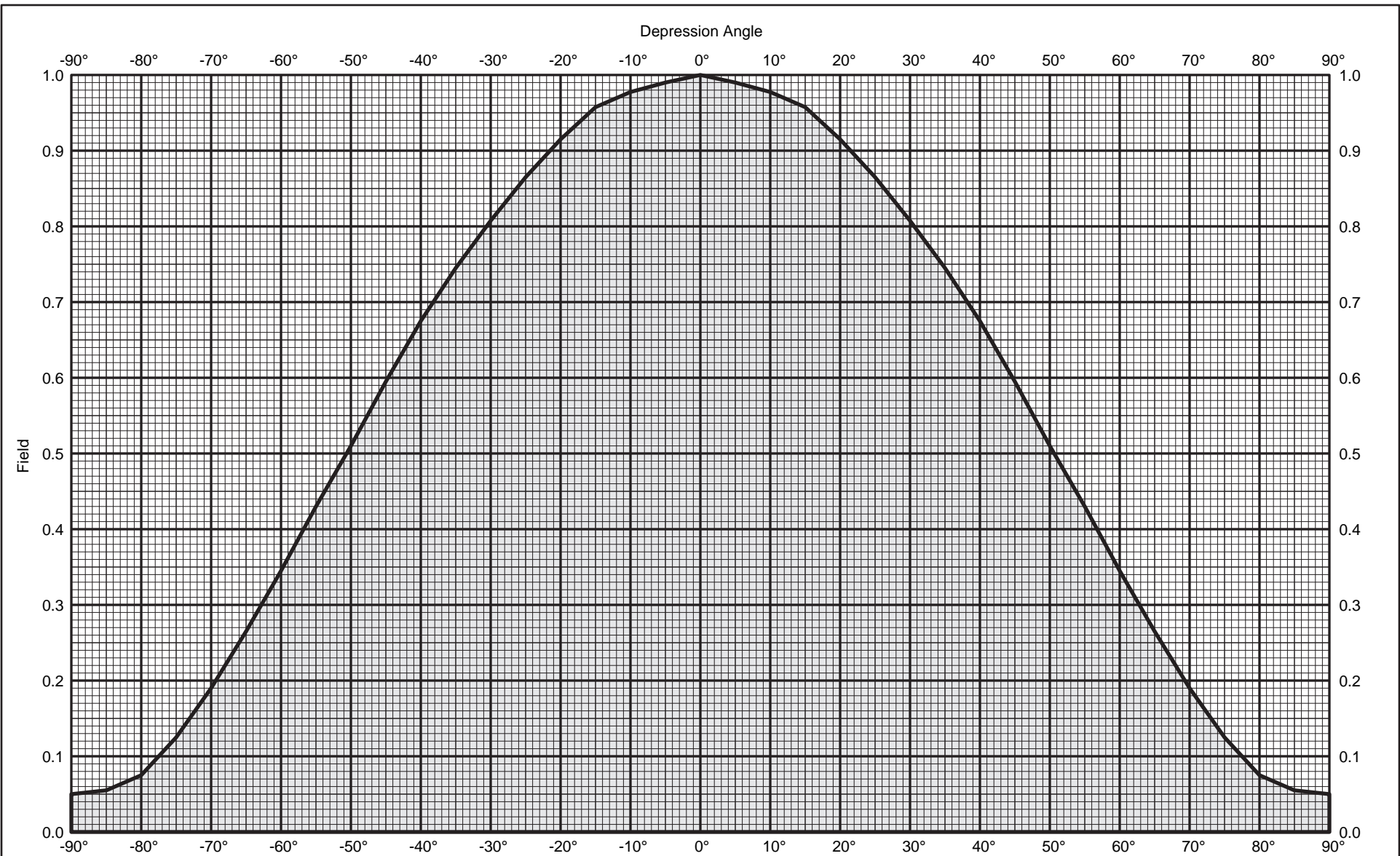
FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **82.2 dBμ**, this makes the proposed translator's worst-case interfering contour **122.2 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **38.5 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 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 **92.3 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 30ft (9.1m) in height. This application provides 92.3m (302.8ft) 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:	SCA
Antenna Model:	CA2-CP @ 265°
CORAGL:	110 m
Maximum ERP:	0.05 kW
Interfering Contour:	122.2 dBμ
Max Int. Contour Distance:	38.5 m
Min Ground Clearance:	92.3 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	.990	49.0	38.1	38.0	106.7
10	.979	47.9	37.7	37.1	103.5
15	.952	45.3	36.7	35.4	100.5
20	.920	42.3	35.4	33.3	97.9
25	.877	38.5	33.8	30.6	95.7
30	.829	34.4	31.9	27.6	94.0
35	.772	29.8	29.7	24.3	93.0
40	.715	25.6	27.5	21.1	92.3
45	.647	20.9	24.9	17.6	92.4
50	.570	16.2	21.9	14.1	93.2
55	.487	11.9	18.8	10.8	94.6
60	.388	7.5	14.9	7.5	97.1
65	.292	4.3	11.2	4.8	99.8
70	.187	1.7	7.2	2.5	103.2
75	.095	0.5	3.7	0.9	106.5
80	.045	0.1	1.7	0.3	108.3
85	.032	0.1	1.2	0.1	108.8
90	.030	0.0	1.2	0.0	108.8
Minimum Clearance above TGL:					92.3 m



KATHREIN
SCALA DIVISION

Post Office Box 4580 Phone:(541)779-6500
Medford, OR 97501 (USA) Fax:(541)779-3991
<http://www.kathrein-scala.com>

CA2-FM

FM

Maximum gain: 4.0 dBd

Vertical polarization

Vertical radiation pattern

0 degree electrical downtilt



CA2-FM

FM

Maximum gain: 4.0 dBd

Vertical polarization

Vertical radiation pattern

0 degree electrical downtilt

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
-90	0.050	-26.02	-22.02	0.01	-45	0.595	-4.51	-0.51	0.89
-89	0.051	-25.85	-21.85	0.01	-44	0.611	-4.28	-0.28	0.94
-88	0.052	-25.68	-21.68	0.01	-43	0.627	-4.05	-0.05	0.99
-87	0.053	-25.51	-21.51	0.01	-42	0.643	-3.84	0.16	1.04
-86	0.054	-25.35	-21.35	0.01	-41	0.659	-3.62	0.38	1.09
-85	0.055	-25.19	-21.19	0.01	-40	0.675	-3.41	0.59	1.14
-84	0.059	-24.58	-20.58	0.01	-39	0.689	-3.24	0.76	1.19
-83	0.063	-24.01	-20.01	0.01	-38	0.703	-3.06	0.94	1.24
-82	0.067	-23.48	-19.48	0.01	-37	0.717	-2.89	1.11	1.29
-81	0.071	-22.97	-18.97	0.01	-36	0.731	-2.72	1.28	1.34
-80	0.075	-22.50	-18.50	0.01	-35	0.745	-2.56	1.44	1.39
-79	0.085	-21.41	-17.41	0.02	-34	0.757	-2.41	1.59	1.44
-78	0.095	-20.45	-16.45	0.02	-33	0.770	-2.27	1.73	1.49
-77	0.105	-19.58	-15.58	0.03	-32	0.783	-2.13	1.87	1.54
-76	0.115	-18.79	-14.79	0.03	-31	0.795	-1.99	2.01	1.59
-75	0.125	-18.06	-14.06	0.04	-30	0.808	-1.86	2.14	1.64
-74	0.138	-17.20	-13.20	0.05	-29	0.819	-1.73	2.27	1.68
-73	0.151	-16.42	-12.42	0.06	-28	0.831	-1.61	2.39	1.73
-72	0.164	-15.70	-11.70	0.07	-27	0.842	-1.49	2.51	1.78
-71	0.177	-15.04	-11.04	0.08	-26	0.854	-1.38	2.62	1.83
-70	0.190	-14.42	-10.42	0.09	-25	0.865	-1.26	2.74	1.88
-69	0.205	-13.76	-9.76	0.11	-24	0.875	-1.16	2.84	1.92
-68	0.220	-13.15	-9.15	0.12	-23	0.885	-1.06	2.94	1.97
-67	0.235	-12.58	-8.58	0.14	-22	0.895	-0.96	3.04	2.01
-66	0.250	-12.04	-8.04	0.16	-21	0.905	-0.87	3.13	2.06
-65	0.265	-11.54	-7.54	0.18	-20	0.915	-0.77	3.23	2.10
-64	0.281	-11.03	-7.03	0.20	-19	0.924	-0.69	3.31	2.14
-63	0.297	-10.54	-6.54	0.22	-18	0.932	-0.61	3.39	2.18
-62	0.313	-10.09	-6.09	0.25	-17	0.940	-0.53	3.47	2.22
-61	0.329	-9.66	-5.66	0.27	-16	0.949	-0.45	3.55	2.26
-60	0.345	-9.24	-5.24	0.30	-15	0.957	-0.38	3.62	2.30
-59	0.362	-8.83	-4.83	0.33	-14	0.961	-0.34	3.66	2.32
-58	0.379	-8.43	-4.43	0.36	-13	0.965	-0.30	3.70	2.34
-57	0.396	-8.05	-4.05	0.39	-12	0.970	-0.27	3.73	2.36
-56	0.413	-7.68	-3.68	0.43	-11	0.974	-0.23	3.77	2.38
-55	0.430	-7.33	-3.33	0.46	-10	0.978	-0.20	3.80	2.40
-54	0.446	-7.01	-3.01	0.50	-9	0.980	-0.18	3.82	2.41
-53	0.462	-6.71	-2.71	0.54	-8	0.982	-0.15	3.85	2.42
-52	0.478	-6.41	-2.41	0.57	-7	0.985	-0.13	3.87	2.44
-51	0.494	-6.13	-2.13	0.61	-6	0.988	-0.11	3.89	2.45
-50	0.510	-5.85	-1.85	0.65	-5	0.990	-0.09	3.91	2.46
-49	0.527	-5.56	-1.56	0.70	-4	0.992	-0.07	3.93	2.47
-48	0.544	-5.29	-1.29	0.74	-3	0.994	-0.05	3.95	2.48
-47	0.561	-5.02	-1.02	0.79	-2	0.996	-0.03	3.97	2.49
-46	0.578	-4.76	-0.76	0.84	-1	0.998	-0.02	3.98	2.50
					0	1.000	0.00	4.00	2.51



CA2-FM

FM

Maximum gain: 4.0 dBd

Vertical polarization

Vertical radiation pattern

0 degree electrical downtilt

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	4.00	2.51	45	0.595	-4.51	-0.51	0.89
1	0.998	-0.02	3.98	2.50	46	0.578	-4.76	-0.76	0.84
2	0.996	-0.03	3.97	2.49	47	0.561	-5.02	-1.02	0.79
3	0.994	-0.05	3.95	2.48	48	0.544	-5.29	-1.29	0.74
4	0.992	-0.07	3.93	2.47	49	0.527	-5.56	-1.56	0.70
5	0.990	-0.09	3.91	2.46	50	0.510	-5.85	-1.85	0.65
6	0.988	-0.11	3.89	2.45	51	0.494	-6.13	-2.13	0.61
7	0.985	-0.13	3.87	2.44	52	0.478	-6.41	-2.41	0.57
8	0.982	-0.15	3.85	2.42	53	0.462	-6.71	-2.71	0.54
9	0.980	-0.18	3.82	2.41	54	0.446	-7.01	-3.01	0.50
10	0.978	-0.20	3.80	2.40	55	0.430	-7.33	-3.33	0.46
11	0.974	-0.23	3.77	2.38	56	0.413	-7.68	-3.68	0.43
12	0.970	-0.27	3.73	2.36	57	0.396	-8.05	-4.05	0.39
13	0.965	-0.30	3.70	2.34	58	0.379	-8.43	-4.43	0.36
14	0.961	-0.34	3.66	2.32	59	0.362	-8.83	-4.83	0.33
15	0.957	-0.38	3.62	2.30	60	0.345	-9.24	-5.24	0.30
16	0.949	-0.45	3.55	2.26	61	0.329	-9.66	-5.66	0.27
17	0.940	-0.53	3.47	2.22	62	0.313	-10.09	-6.09	0.25
18	0.932	-0.61	3.39	2.18	63	0.297	-10.54	-6.54	0.22
19	0.924	-0.69	3.31	2.14	64	0.281	-11.03	-7.03	0.20
20	0.915	-0.77	3.23	2.10	65	0.265	-11.54	-7.54	0.18
21	0.905	-0.87	3.13	2.06	66	0.250	-12.04	-8.04	0.16
22	0.895	-0.96	3.04	2.01	67	0.235	-12.58	-8.58	0.14
23	0.885	-1.06	2.94	1.97	68	0.220	-13.15	-9.15	0.12
24	0.875	-1.16	2.84	1.92	69	0.205	-13.76	-9.76	0.11
25	0.865	-1.26	2.74	1.88	70	0.190	-14.42	-10.42	0.09
26	0.854	-1.38	2.62	1.83	71	0.177	-15.04	-11.04	0.08
27	0.842	-1.49	2.51	1.78	72	0.164	-15.70	-11.70	0.07
28	0.831	-1.61	2.39	1.73	73	0.151	-16.42	-12.42	0.06
29	0.819	-1.73	2.27	1.68	74	0.138	-17.20	-13.20	0.05
30	0.808	-1.86	2.14	1.64	75	0.125	-18.06	-14.06	0.04
31	0.795	-1.99	2.01	1.59	76	0.115	-18.79	-14.79	0.03
32	0.783	-2.13	1.87	1.54	77	0.105	-19.58	-15.58	0.03
33	0.770	-2.27	1.73	1.49	78	0.095	-20.45	-16.45	0.02
34	0.757	-2.41	1.59	1.44	79	0.085	-21.41	-17.41	0.02
35	0.745	-2.56	1.44	1.39	80	0.075	-22.50	-18.50	0.01
36	0.731	-2.72	1.28	1.34	81	0.071	-22.97	-18.97	0.01
37	0.717	-2.89	1.11	1.29	82	0.067	-23.48	-19.48	0.01
38	0.703	-3.06	0.94	1.24	83	0.063	-24.01	-20.01	0.01
39	0.689	-3.24	0.76	1.19	84	0.059	-24.58	-20.58	0.01
40	0.675	-3.41	0.59	1.14	85	0.055	-25.19	-21.19	0.01
41	0.659	-3.62	0.38	1.09	86	0.054	-25.35	-21.35	0.01
42	0.643	-3.84	0.16	1.04	87	0.053	-25.51	-21.51	0.01
43	0.627	-4.05	-0.05	0.99	88	0.052	-25.68	-21.68	0.01
44	0.611	-4.28	-0.28	0.94	89	0.051	-25.85	-21.85	0.01
					90	0.050	-26.02	-22.02	0.01

Adjacent Channel Study **For Station K237FL, Facility_id: 147460**

Co-channel through third adjacent:

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Char	Adj	Dist	Overlap
264236	28622	BLH-19980324KA	KROQ-FM	CBS RADIO INC. OF LOS ANGELES	B	PASADENA	CA	LIC	5.5	868	294	2	21.4	0.9796
1414072	35498	BMLH-20101221ACA	KPWR	EMMIS RADIO LICENSE, LLC	B	LOS ANGELES	CA	LIC	25	1811	290	2	34.6	0.9796
1593770	196771	BNPL-20131114BIO	NEW	SOCIETY FOR THE ACTIVATION OF	L1	LOS ANGELES	CA	CP	0	211	292	0	17.3	0
204988	34426	BLFT-19941219TD	K292CR	AMFM BROADCASTING LICENSE	D	SIMI VALLEY	CA	LIC	0.004	645	292	0	39	0
1357424	180881	BLFTB-20100122ABN	KROQ-FM1	CBS RADIO INC. OF LOS ANGELES	D	SANTA CLARITA	CA	LIC	0.05	1132	294	2	41.6	0
276212	29020	BLH-19981028KF	KALI-FM	KALI-FM LICENSEE, LLC	A	SANTA ANA	CA	LIC	6	160	292	0	54	0
1584358	19703	BPH-20131203APH	KGMX	HIGH DESERT BROADCASTING L	A	LANCASTER	CA	CP	3	824	292	0	83.2	0
1542234	10329	BLH-20130311AEJ	KRRF	CUMULUS LICENSING LLC	A	OAK VIEW	CA	LIC	0.96	393	292	0	90.6	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
70727	35078	BLH-19840702CP	KLOS	RADIO LICENSE HOLDINGS LLC	B	LOS ANGELES	CA	LIC	61	1851	238	54	34.6	19.6

