

## **Non-Interference Compliance**

Regarding Facility id 152717

Channel 270

### **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 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 4 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 5 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 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.

<b>Application_id</b>	<b>File Number</b>	<b>Callsign</b>	<b>Contour at Tower</b>	<b>Min. Contour</b>
104422	BMLH19870814KA	KNIX-FM	98.1	97
291428	BLH6108	KZON	98.5	97.4
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				<b>97</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 **97 dBμ**, this makes the proposed translator's worst-case interfering contour **137 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **15.7 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 4 of this exhibit). However, since the area of interference extends a maximum of **15.7 m** from the transmit antenna and the transmit antenna is **56 m** above tower ground level (TGL), the area of interference will be at least **40.3 m** above TGL 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.

<b>Antenna Manufacturer:</b>	<b>SCA</b>
<b>Antenna Model:</b>	<b>FMV</b>
<b>CORAGL:</b>	<b>56 m</b>
<b>Maximum ERP:</b>	<b>0.25 kW</b>
<b>Interfering Contour:</b>	<b>137 dBμ</b>
<b>Max Int. Contour Distance:</b>	<b>15.7 m</b>
<b>Min Ground Clearance:</b>	<b>40.3 m</b>

# **Adjacent Channel Study** **For Station NEW, Facility\_id: 152717**

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

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Chan	Adj	Dist	Overlap
104422	7698	BMLH-19870814KA	KNIX-FM	CC LICENSES, LLC	C	PHOENIX	AZ	LIC	98	853	273	3	14.1	2.45
291428	63913	BLH-6108	KZON	CBS RADIO STATIONS INC.	C	PHOENIX	AZ	LIC	100	889	268	2	14.3	2.45
1060288	142837	BLFT-20050504ABV	K270BA	GRAND CANYON BROADCASTERS, INC.	D	WICKENBURG	AZ	LIC	0.115	841	270	0	89.1	0
1504534	61510	BPH-20100813BHN	KAHM	SOUTHWEST FM BROADCASTING CO., INC.	C	SPRING VALLEY	AZ	CP	25.5	2385	271	1	92.6	0
218059	61510	BLH-19960111BK	KAHM	SOUTHWEST FM BROADCASTING CO., INC.	C	PRESCOTT	AZ	LIC	54	2356	271	1	137.5	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
1565045	175820	BMPED-20130312ABR	KVNG	CALVARY CHAPEL OF CASA GRANDE	C2	ELOY	AZ	CP MOD	0.74	1386	216	54	99.9	84.9









40 yds