

## **Non-Interference Compliance**

Regarding Facility id 93793

Channel 217

### **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.

Application_id	File Number	Callsign	Contour at Tower	Min. Contour
1063931	BLED20050531AIX BMLED20181220AA	KLRV	118.6	113.3
1797569	T	KEMC	91.3	91
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				<b>91</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 **91 dBμ**, this makes the proposed translator's worst-case interfering contour **131 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **17.1 m** from the transmit antenna.

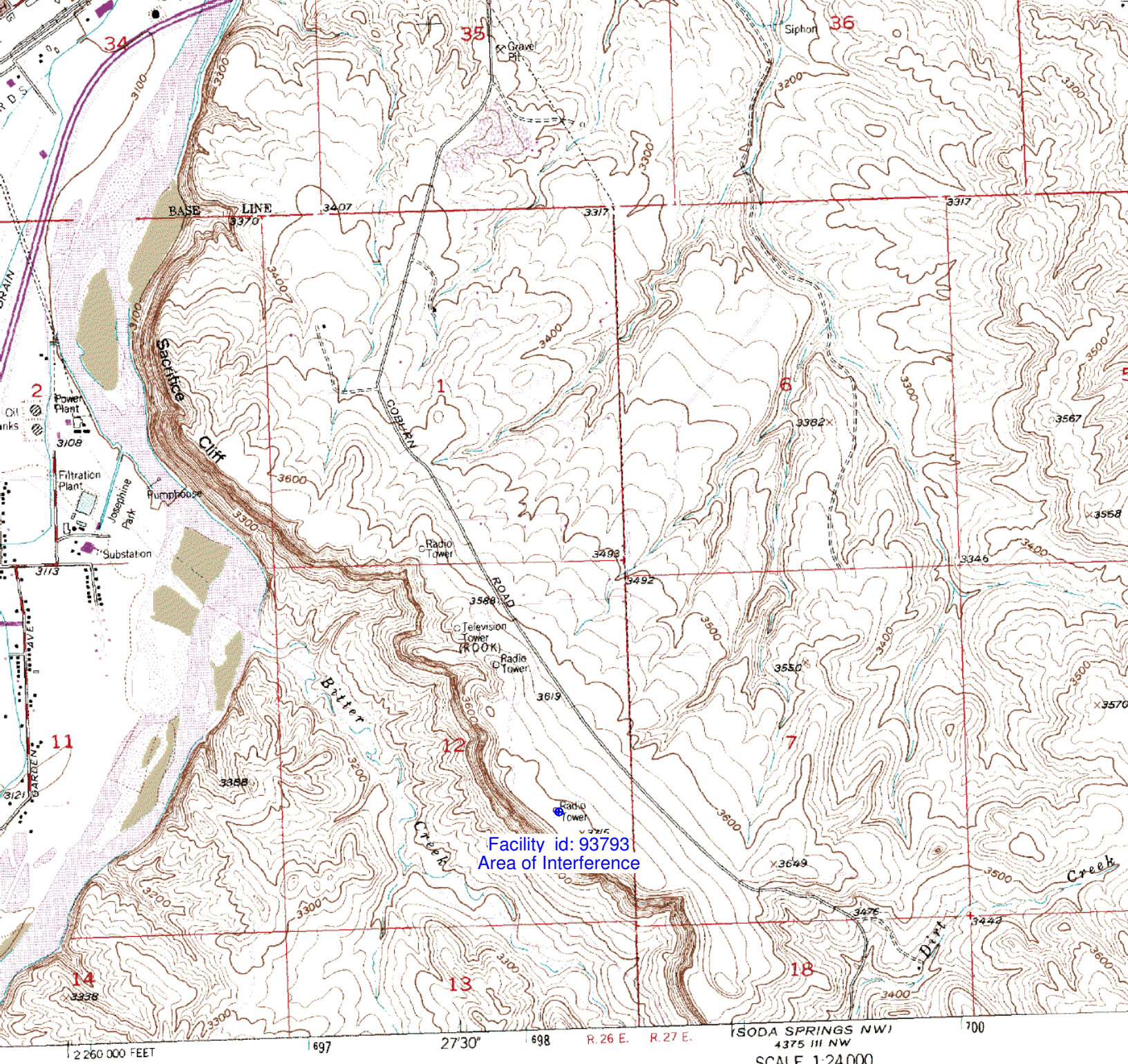
The interfering contour of the proposed translator was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 4 of this exhibit). As demonstrated on the quadrangle, there are no populated structures or highways within the area of interference (Note: FCC 02-244 at Section II.A.6 states that USGS quadrangles "have been recognized as acceptable to demonstrate lack of population"). 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.

**Antenna Manufacturer:** TEL  
**Antenna Model:** ANT90D  
**CORAGL:** 30.48 m  
**Maximum ERP:** 0.075 kW  
**Interfering Contour:** 131 dBμ  
**Max Int. Contour Distance:** 17.1 m

# **Adjacent Channel Study** **For Station K217EM, Facility\_id: 93793**

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

App_id	Fac_id	File_Number	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Chan	Adj	Dist	Overlap
1063931	91499	BLED-20050531AIX	KLRV	EDUCATIONAL MEDIA FOUNDATI	C3	BILLINGS	MT	LIC	7.5	1230	215	2	0.7	0.4475
1797569	43571	BMLD-20181220AA	KEMC	MONTANA STATE UNIVERSITY - E	C1	BILLINGS	MT	LIC	100	1280	219	2	14.5	0.4475
1748994	195668	BLL-20170123FKX	KODH-LP	CENTER POLE, INC	L1	GARRYOWEN	MT	LIC	0	973.28	216	1	78.5	0
1788642	121854	BPED-20180717AAE	KOFG	GOSPEL MESSENGERS	C2	CODY	WY	CP	4	1977	216	1	135.1	0
1403338	121854	BLED-20101006AAV	KOFG	GOSPEL MESSENGERS	C1	CODY	WY	LIC	8.7	2333	216	1	150.8	0
1758812	82438	BPED-20170615AAH	KSUW	UNIVERSITY OF WYOMING	C1	SHERIDAN	WY	CP	20	2369	217	0	164	0

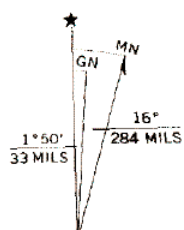


the Geological Survey  
interior program  
ri River Basin

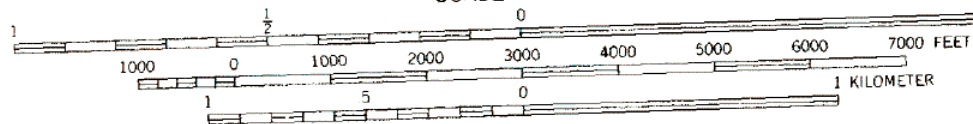
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amation and by  
veys 1956 by USGS

merican Datum  
coordinate system,

icator grid ticks,  
Revisions shown in purple and recompilation of woodland areas  
compiled from aerial photographs taken 1969 and 1975.  
This information not field checked  
Purple tint indicates extension of urban areas



UTM GRID AND 1975 MAGNETIC NORTH  
DECLINATION AT CENTER OF SHEET



CONTOUR INTERVAL 20 FEET  
DOTTED LINES REPRESENT 10-FOOT CONTOURS  
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS  
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA  
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



