ENGINEERING STATEMENT
SUPPORTING REQUEST FOR WAIVER
TELEVISION STATION KMBH(TV)
(FACILITY ID NO. 56079)
HARLINGEN, TEXAS
CHANNEL 16

Background

This statement was prepared on behalf of MBTV Texas Valley, LLC, licensee of KMBH, Harlingen, Texas, in support of a request for waiver of the FCC's Phase Assignment, Testing Period, and Phase Completion Date for television station KMBH in the Harlingen-Weslaco-Brownsville-McAllen DMA[*]. KMBH is licensed for operation on RF Channel 38 with a maximum directional effective radiated power (ERP) of 1000 kW and an antenna height above average terrain (HAAT) of 345.5 m.[†]

As a result of the FCC's Incentive Auction repack process, the KMBH facility was reassigned to RF Channel 16. KMBH now holds a construction permit for operation on Channel 16 with a maximum directional ERP of 618 kW and an antenna HAAT of 345.5 m.[‡] An FCC engineering database summary sheet for the KMBH construction permit facility is attached hereto for reference. The KMBH construction permit facility is the subject early transition facility.

In coordination with the wireless carrier T-Mobile, MBTV Texas Valley, LLC seeks a waiver of the FCC's Phase Assignment, Testing Period, and Phase Completion Date to allow KMBH to make the transition to Channel 16 earlier than its given phase transition date. Specifically, the target date for KMBH to begin operations on Channel 16 is April 12, 2019. This will facilitate the early deployment of new 600 MHz band wireless broadband services.

This statement demonstrates that the KMBH facility can transition to Channel 16 before its assigned phase date without any disruption to the FCC's transition plans. Specifically, it is demonstrated that the operation of KMBH on Channel 16 will have no

[*] Nielsen Designated Market Area abbreviated as DMA.
[†] See FCC File No. BMLCDT-20140924ABC.
[‡] See FCC File No. 0000028643.

adverse interference consequences, either caused or received, under the current allocation environment.

Assigned Phase

KMBH is assigned to transition Phase 8, with a testing begin date of January 18, 2020. This is based on the latest FCC Phase Assignment spreadsheet dated September 13, 2018.

Linked Station Sets and Linked Station Neighbor Stations

An inspection of the latest FCC Linked Station Set (LSS) and Linked Station Neighbor (LSN) spreadsheet databases indicates that the KMBH facility is not part of any LSSs or LSNs. These are based on the latest LSS and LSN spreadsheets available from the FCC, both dated July 27, 2018.

Interference Caused Analysis Under Current Allocation Environment

An interference analysis was conducted for the KMBH Channel 16 facility utilizing the latest version[§] of the FCC's *TVStudy* coverage and interference analysis prediction software. The report of the results is attached hereto entitled 'Interference Caused Analysis for KMBH Channel 16 Construction Permit Facility Under Current Allocation Environment.'

The results of the analysis indicate that the proposal meets the 0.5% permissible interference level with respect to interference caused to all other full-service and Class A television stations.

Interference Received Analysis Under Current Allocation Environment

An interference analysis specifically for the 'received case' of interference was conducted for the KMBH Channel 16 early transition facility utilizing the FCC's *TVStudy* prediction software. The report of the results is attached hereto entitled 'Interference Received Analysis for KMBH Channel 16 Construction Permit Facility Under Current

[§] *TVStudy* version 2.2.5

Allocation Environment.' The purpose of this study is to evaluate all current environment records in the received interference analysis.

The results of the analysis indicate that there are no cases of incoming (received) interference exceeding the permissible 0.5% interference level to the KMBH Channel 16 early transition facility.

Effects on Linked Station Sets

It has been determined that the early transition of the KMBH facility to Channel 16 in advance of its phase transition date will not create any pairwise interference cases or new linked station sets.

Conclusion

It is concluded that the early transition of the KMBH facility on Channel 16 as described herein, will not result in any interference caused or received cases that would result in the creation of any new linked station sets or dependencies established in the Incentive Auction repack process.

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du Treil, Lundin & Rackley, Inc.
3135 Southgate Circle
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September 30, 2018

TV Inquiry

KMBH EARLY TRANSITION FACILITY

du Treil, Lundin, & Rackley, Inc., Sarasota, Florida

Callsign: KMBH **Service:** DT **Status:** CP **App. Status:** GRANT **Border Code:** **Rec. Type:** C

Channel: 16 **Offset:** **Zone:** 2 **Docket Number:** **DTV Type:** POSTTRAN

Fac. ID: 56079 **Assoc. ID:** **Application File No.:** BLANK-0000028643 **DT Emission Mask:**

City: HARLINGEN **State:** TX **Country:** US **CP Expiration Date:**

Party Name: MBTV TEXAS VALLEY, LLC **Last Change Date:** 7/27/2017

Latitude (NAD 83): 26-07-15
Longitude (NAD 83): 097-49-19

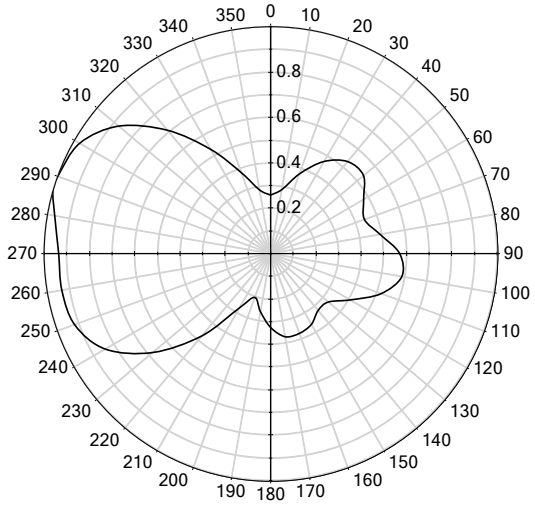
RCAMSL (m): 360.3
Site Elevation AMSL (m): 15.8
HAAT (m): 345.5
Maximum HAAT (m):

Height AGL (m): 344.5
Overall Height AGL (m): 379.2
ERP (kW): 618
Maximum ERP (kW):
Maximum ERP (dBk): 27.9
Maximum ERP at any Angle (kW):

Polarization: H
Electrical Tilt (°): 1
Mechanical Tilt (°):
Mechanical Tilt Azimuth (°):
Degrees True (°):
Antenna Make:
Antenna Model:

Antenna Type: D **Antenna ID:** 1001887 **Rotation (°):** 0

0°	0.258	**90°**	0.570	**180°**	0.326	**270°**	0.936	**286°**	1.000
10°	0.286	**100°**	0.588	**190°**	0.260	**280°**	0.968		
20°	0.374	**110°**	0.518	**200°**	0.206	**290°**	0.999		
30°	0.468	**120°**	0.408	**210°**	0.277	**300°**	0.973		
40°	0.529	**130°**	0.332	**220°**	0.474	**310°**	0.874		
50°	0.535	**140°**	0.327	**230°**	0.678	**320°**	0.710		
60°	0.474	**150°**	0.360	**240°**	0.842	**330°**	0.531		
70°	0.441	**160°**	0.374	**250°**	0.920	**340°**	0.380		
80°	0.490	**170°**	0.372	**260°**	0.936	**350°**	0.285		



Standard Pattern:

Antenna Make: And

Antenna Model: ATW15HS4-ETPX-16H

Last Change Date:

Note: Rotation or tilt is not applied to the pattern shown

Type: TOWER **ASRN:** 1046272 **FAA Study No.:** 84-ASW-3034-OE **Structure Height (m):** 365.8

Latitude (NAD 27): 026-07-13.7 **Date Received:** 01/29/2015 **Structure Height (ft):** 1200.1
Longitude (NAD 27): 097-49-18 **Date Entered:** 01/29/2015 **Ground Elevation (m):** 15.8
Latitude (NAD 83): 26-07-15.0 **Date Issued:** 01/29/2015 **Ground Elevation (ft):** 51.8
Longitude (NAD 83): 097-49-19.0 **Date Constructed:** 10/01/1985 **Overall Height AGL (m):** 379.2
Date Dismantled: **Overall Height AGL (ft):** 1244.1

Struct. Address:
2 MILES SOUTH
LA FERIA TX

Overall Height AMSL (m): 395.0
Overall Height AMSL (ft): 1295.9

Entity Name: MBTV Texas Valley LLC

INTERFERENCE CAUSED ANALYSIS FOR KMBH CHANNEL 16 CONSTRUCTION PERMIT FACILITY UNDER CURRENT ALLOCATION ENVIRONMENT

```
tvstudy v2.2.5 (4uoc83)
Database: localhost,  Study: kmbh16e2,  Model: Longley-Rice

Study build station data: LMS TV 2018-09-27

    Proposal: KMBH16E2 D16 DT CP HARLINGEN, TX
 File number: kmbh16e2
 Facility ID: 56079
Station data: User record
   Record ID: 3241
     Country: U.S.
        Zone: II

Build options:
Protect pre-transition records not on baseline channel

Search options:
Non-U.S. records included
All post-transition APP, CP, and baseline records excluded

Stations potentially affected by proposal:

IX   Call      Chan       Svc Status  City, State              File Number             Distance
No   KHCE-TV   D16        DT  APP     SAN ANTONIO, TX          BLANK0000035698         354.9 km
No   KHCE-TV   D16        DT  LIC     SAN ANTONIO, TX          BLEDT20110215AEM        354.9
No   XEFB      D15        DT  LIC     MONTERREY, NL            BLANKBPFS20160309AAI    247.3
Yes  XHVTV     D15        DT  LIC     EL CONTROL, TA           BLANKBPFS20160318AAF     21.6
Yes  XHOPMT    D16        DT  LIC     MONTERREY, NL            BLANKBPFS20160309AAT    255.6
No   XHFN      D17        DT  LIC     MONTERREY, NL            BLANKBPFS20160309AAU    255.9
No   XEFE      D17        DT  LIC     NUEVO LAREDO, TA         BLANKBPFS20130220AAF    224.7

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

    Channel: D16
   Latitude:  26  7 15.00 N (NAD83)
  Longitude:  97 49 19.00 W
Height AMSL: 360.3 m
       HAAT: 345.5 m
   Peak ERP: 618 kW
    Antenna: Andrew-ATW15HS4-ETPX-16H (ID 1001887) 0.0 deg
Elev Pattrn: Generic
  Elec Tilt: 1.00

38.9 dBu contour:
Azimuth      ERP       HAAT   Distance
  0.0 deg   41.1 kW   344.8 m   80.1 km
 45.0        175      346.4     90.8
 90.0        201      346.1     91.9
135.0       67.1      343.3     83.3
180.0       65.7      340.4     82.8
225.0        205      338.1     91.3
270.0        541      342.1     99.9
315.0        388      342.3     97.0

Database HAAT does not agree with computed HAAT
Database HAAT: 346 m   Computed HAAT: 343 m

Distance to Canadian border: 2208.9 km

**Proposal is within coordination distance of Mexican border
Distance to Mexican border: 6.9 km

Conditions at FCC monitoring station: Kingsville TX
Bearing: 357.6 degrees   Distance: 146.9 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
```

INTERFERENCE CAUSED ANALYSIS FOR KMBH CHANNEL 16 CONSTRUCTION PERMIT FACILITY UNDER CURRENT ALLOCATION ENVIRONMENT

Bearing: 338.1 degrees Distance: 1700.0 km

No land mobile station failures found

Study cell size: 2.00 km
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

Interference to BLANKBPFS20160318AAF LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	XHVTV	D15	DT	LIC	EL CONTROL, TA	BLANKBPFS20160318AAF	
Undesireds:	KMBH16E2	D16	DT	CP	HARLINGEN, TX	kmbh16e2	21.6 km
	XEFB	D15	DT	LIC	MONTERREY, NL	BLANKBPFS20160309AAI	235.5

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
5830.5	1,182,876	5830.5	1,182,876	5726.5	1,159,451	4211.2	1,098,030	26.46	5.30(in U.S.)
7971.8	1,276,095	7967.8	1,276,095	7558.8	1,273,087	7530.7	1,273,087	0.37	0.00

Undesired	Total IX		Unique IX, before		Unique IX, after		
KMBH16E2 D16 DT CP	1543.3	66,768			1515.3	61,421	(in U.S.)
KMBH16E2 D16 DT CP	152.2	1,842			28.1	0	
XEFB D15 DT LIC	104.0	23,425	104.0	23,425	76.0	18,078	(in U.S.)
XEFB D15 DT LIC	409.0	3,008	409.0	3,008	284.8	1,166	

Interference to BLANKBPFS20160309AAT LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	XHOPMT	D16	DT	LIC	MONTERREY, NL	BLANKBPFS20160309AAT	
Undesireds:	KMBH16E2	D16	DT	CP	HARLINGEN, TX	kmbh16e2	255.6 km
	XEFB	D15	DT	LIC	MONTERREY, NL	BLANKBPFS20160309AAI	8.3
	XHFN	D17	DT	LIC	MONTERREY, NL	BLANKBPFS20160309AAU	0.3

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
15700.2	4,361,799	11890.9	4,207,047	10295.9	4,149,924	10183.8	4,148,546	1.09	0.03

Undesired	Total IX		Unique IX, before		Unique IX, after	
KMBH16E2 D16 DT CP	849.9	19,166			112.1	1,378
XEFB D15 DT LIC	1563.0	50,808	1482.9	50,248	785.1	32,890
XHFN D17 DT LIC	112.1	6,875	32.0	6,315	28.0	6,315

INTERFERENCE RECEIVED ANALYSIS FOR KMBH CHANNEL 16 CONSTRUCTION PERMIT FACILITY UNDER CURRENT ALLOCATION ENVIRONMENT

```
tvstudy v2.2.5 (4uoc83)

    Database: localhost
Station Data: LMS TV 2018-08-07
       Study: LMS180808
       Model: Longley-Rice
    Scenario: kmbh16e2r
```

Desired station / Undesired station	Service area		Terrain-limited		Interference-free	
	Total interference		Unique interference			
KMBH16E2 D16 DT CP HARLINGEN, TX	14293.5	1,225,732	14293.5	1,225,732	14285.5	1,224,176
KHCE-TV D16 DT LIC SAN ANTONIO, TX	0.0	0	0.0	0		
XHOPMT D16 DT LIC MONTERREY, NL	8.0	1,556	8.0	1,556 (0.13%)		
XHVTV D15 DT LIC EL CONTROL, TA	0.0	0	0.0	0		
KMBH16E2 D16 DT CP HARLINGEN, TX	10983.5	1,292,367	10963.4	1,292,367	10959.4	1,292,367(in Mexico)
XHOPMT D16 DT LIC MONTERREY, NL	4.0	0	4.0	0		
XHVTV D15 DT LIC EL CONTROL, TA	0.0	0	0.0	0		