

#### Post-Transition DTV Considerations

A study was performed using the FCC's software program, *tv\_study*, v.2.2.2, to determine if the facility proposed herein is predicted to cause new prohibited interference to post reassignment DTV station, construction permits, DTV allotments, or Class A DTV stations. As demonstrated in the attached study results, the instant proposal is predicted to cause no new interference exceeding 0.5% to the populations served by any post reassignment DTV station, construction permit, allotment, or Class A DTV stations. In addition, the attached study also demonstrates that the proposed service area resulting from the technical facility proposed herein is within the baseline service area plus 1%. Accordingly, the instant proposal satisfies all applicable DTV coverage and DTV interference criteria.

#### International DTV Considerations

As shown in the attached study, the transmitter site specified herein not within 320 kilometers of either the common border between the United States of America and Canada or between the USA and Mexico. Therefore, international notification and coordination of the instant proposal is not required.

tvstudy v2.2.2  
Database: localhost, Study: DTVBL166319 (989), Model: Longley-Rice  
Start: 2017.06.20 14:14:02

Study created: 2017.06.20 14:13:55

Study build station data: LMS TV 2017-06-19 (18)

Proposal: KRBK D22 (D49) DD BL OSAGE BEACH, MO  
File number: DTVBL166319  
Facility ID: 166319  
Station data: LMS TV 2017-06-19 (18)  
Record ID: DTVBL166319  
Country: U.S.  
Zone: II  
Ref. lat.: 37 43 26.10 N  
Ref. long.: 93 16 32.60 W  
# DTS sites: 5

Non-U.S. records included

Stations potentially affected:

Call	Chan	Svc	Status	City, State	File Number
KTAJ-TV	D21	DT	LIC	ST. JOSEPH, MO	BLCDT20060703AAK
	Distance				
	180.2 km				
KATV	D22	DT	LIC	LITTLE ROCK, AR	BLCDT20090225AAV
	332.9				
WBUI	D22	DT	LIC	DECATUR, IL	BLCDT20091119ACF
	456.9				
KOKI-TV	D22	DT	LIC	TULSA, OK	BLCDT20021127AGL
	285.0				
KODE-TV	D23	DT	BL	JOPLIN, MO	DTVBL18283
	132.6				

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied, DTS site # 1:

Channel: D22  
Latitude: 37 49 9.60 N (NAD83)  
Longitude: 92 44 52.10 W  
Height AMSL: 596.7 m  
HAAT: 275.1 m  
Peak ERP: 7.36 kW  
Antenna: JAM-JA/LS-24/22 SHBP-S (matrix)

39.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	6.00 kW	294.5 m	64.3 km
45.0	2.13	277.5	57.8
90.0	2.02	271.3	57.1
135.0	6.42	244.1	61.5
180.0	0.908	229.2	50.6
225.0	0.016	283.5	32.0

270.0	0.010	296.7	30.1
315.0	0.208	315.7	47.4

Database HAAT does not agree with computed HAAT  
Database HAAT: 275 m    Computed HAAT: 277 m

Record parameters as studied, DTS site # 2:

Channel: D22  
Latitude: 37 43 26.50 N (NAD83)  
Longitude: 93 16 32.60 W  
Height AMSL: 442.0 m  
HAAT: 136.0 m  
Peak ERP: 24.9 kW  
Antenna: (replication) 0.0 deg

39.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	10.5 kW	166.8 m	58.9 km
45.0	8.68	124.1	55.0
90.0	10.5	120.9	55.6
135.0	20.0	114.0	57.9
180.0	24.9	115.3	59.0
225.0	20.2	125.4	58.9
270.0	10.9	134.9	56.8
315.0	8.54	158.2	57.3

Database HAAT does not agree with computed HAAT  
Database HAAT: 136 m    Computed HAAT: 132 m

Record parameters as studied, DTS site # 3:

Channel: D22  
Latitude: 37 13 24.80 N (NAD83)  
Longitude: 93 14 30.50 W  
Height AMSL: 586.5 m  
HAAT: 191.8 m  
Peak ERP: 7.46 kW  
Antenna: JAM-JA/LS-24/22 SHBP-S (matrix)

39.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.071 kW	198.4 m	35.6 km
45.0	0.124	162.7	36.4
90.0	3.58	171.1	54.0
135.0	3.47	185.8	54.8
180.0	1.70	202.8	52.2
225.0	4.93	196.1	57.1
270.0	3.23	192.2	54.8
315.0	0.136	218.0	40.1

Database HAAT does not agree with computed HAAT  
Database HAAT: 192 m    Computed HAAT: 191 m

Record parameters as studied, DTS site # 4:

Channel: D22  
Latitude: 37 45 17.40 N (NAD83)

Longitude: 93 50 7.20 W  
Height AMSL: 377.1 m  
HAAT: 104.4 m  
Peak ERP: 42.6 kW  
Antenna: JAM-JA/LS-16/22 SHBP-S (matrix)

39.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	38.4 kW	123.3 m	61.7 km
45.0	2.19	116.5	47.9
90.0	0.463	103.6	38.9
135.0	0.546	105.0	39.9
180.0	14.5	79.4	52.4
225.0	34.8	109.8	60.0
270.0	7.81	114.0	53.7
315.0	10.4	126.5	56.0

Database HAAT does not agree with computed HAAT  
Database HAAT: 104 m Computed HAAT: 110 m

Record parameters as studied, DTS site # 5:

Channel: D22  
Latitude: 38 14 17.50 N (NAD83)  
Longitude: 93 19 6.90 W  
Height AMSL: 359.8 m  
HAAT: 119.1 m  
Peak ERP: 25.4 kW  
Antenna: (replication) 0.0 deg

39.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	3.53 kW	102.7 m	48.9 km
45.0	14.0	121.5	56.9
90.0	15.2	127.8	57.8
135.0	1.19	101.3	43.4
180.0	1.11	93.4	42.1
225.0	1.70	122.6	47.1
270.0	18.9	128.5	58.8
315.0	8.30	130.3	55.2

Database HAAT does not agree with computed HAAT  
Database HAAT: 119 m Computed HAAT: 116 m

DTS proposal coverage is within reference facility and distance limit

Distance to Canadian border: 939.6 km

Distance to Mexican border: 1120.7 km

Conditions at FCC monitoring station: Grand Island NE  
DTS site # 1 Bearing: 307.0 degrees Distance: 597.5 km  
DTS site # 2 Bearing: 310.4 degrees Distance: 567.9 km  
DTS site # 3 Bearing: 314.2 degrees Distance: 607.5 km  
DTS site # 4 Bearing: 313.2 degrees Distance: 528.9 km  
DTS site # 5 Bearing: 305.9 degrees Distance: 529.6 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

DTS site # 1	Bearing: 287.2 degrees	Distance: 1107.1 km
DTS site # 2	Bearing: 288.2 degrees	Distance: 1066.1 km
DTS site # 3	Bearing: 290.9 degrees	Distance: 1087.5 km
DTS site # 4	Bearing: 288.5 degrees	Distance: 1018.4 km
DTS site # 5	Bearing: 285.2 degrees	Distance: 1046.1 km

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 BLCDT20060703AAK LIC, scenario 1  
Proposal causes no interference.

-----  
-----  
Interference to BLCDT20090225AAV LIC, scenario 1  
Proposal causes no interference.

-----  
-----  
Interference to BLCDT20091119ACF LIC, scenario 1  
Proposal causes no interference.

-----  
-----  
Interference to BLCDT20091119ACF LIC, scenario 2  
Proposal causes no interference.

-----  
-----  
Interference to BLCDT20091119ACF LIC, scenario 3  
Proposal causes no interference.

-----  
-----  
Interference to BLCDT20091119ACF LIC, scenario 4  
Proposal causes no interference.

-----  
-----  
Interference to BLCDT20021127AGL LIC, scenario 1

File Number	Call	Chan	Svc	Status	City, State
Desired:	KOKI-TV	D22	DT	LIC	TULSA, OK
BLCDT20021127AGL					
Undesireds:	KRBK	D22	DD	BL	OSAGE BEACH, MO
DTVBL166319					
	KHBS	D21	DT	LIC	FORT SMITH, AR

BLCDDT20031121AMR	139.5				
KUOT-CD	D21	DC	BL	OKLAHOMA CITY, OK	
DTVBL31368	176.7				
KATV	D22	DT	LIC	LITTLE ROCK, AR	
BLCDDT20090225AAV	319.7				
KSNC	D22	DT	LIC	GREAT BEND, KS	
BLCDDT20081112AIQ	382.5				
KUVN-CD	D22	DC	BL	FORT WORTH, TX	
DTVBL5319	394.5				
KAUZ-TV	D22	DT	LIC	WICHITA FALLS, TX	
BLCDDT20090724ACR	351.7				
KODE-TV	D23	DT	BL	JOPLIN, MO	
DTVBL18283	155.0				
KSBI	D23	DT	LIC	OKLAHOMA CITY, OK	
BLCDDT20140530AFS	170.0				

Service area		Terrain-limited		IX-free, before	
IX-free, after	Percent New	IX			
37671.9	1,366,220	36775.1	1,352,227	35543.9	1,334,896
35531.9	1,334,869	0.03	0.00		

Undesired		Total IX		Unique IX, before	
Unique IX, after					
KRBK D22 DD BL	24.0	156			
12.0	27				
KHBS D21 DT LIC	795.1	11,368	601.4	7,527	
601.4	7,527				
KATV D22 DT LIC	270.0	5,426	76.3	1,585	
72.3	1,528				
KSNC D22 DT LIC	8.0	1	8.0	1	
8.0	1				
KAUZ-TV D22 DT LIC	44.3	142	36.3	47	
36.3	47				
KODE-TV D23 DT BL	235.1	3,656	235.1	3,656	
227.1	3,584				
KSBI D23 DT LIC	80.4	674	72.3	579	
72.3	579				

-----  
Interference to DTVBL18283 BL, scenario 1

File Number	Call	Chan	Svc	Status	City, State
Desired:	KODE-TV	D23	DT	BL	JOPLIN, MO
DTVBL18283					
Undesireds:	KRBK	D22	DD	BL	OSAGE BEACH, MO
DTVBL166319					
	KOKI-TV	D22	DT	LIC	TULSA, OK
BLCDDT20021127AGL					
	KSBI	D23	DT	LIC	OKLAHOMA CITY, OK
BLCDDT20140530AFS					
	KKAF-CD	D24	DC	BL	SILLOAM SPRINGS, AR
DTVBL52432					

Service area		Terrain-limited		IX-free, before	
IX-free, after	Percent New	IX			

26109.7	606,871	25866.6	604,558	25602.9	602,114
25563.2	601,920	0.16	0.03		

Undesired			Total IX	Unique IX, before	
Unique IX, after					
KRBK D22 DD BL	39.7		194		
39.7	194				
KOKI-TV D22 DT LIC	35.9		392	15.9	249
15.9	249				
KSBI D23 DT LIC	151.8		1,114	123.9	834
123.9	834				
KKAF-CD D24 DC BL	107.8		1,254	95.8	1,081
95.8	1,081				

-----  
Interference to proposal, scenario 1  
2.25% interference

File Number	Call	Chan	Svc	Status	City, State
Desired:	KRBK	D22	DD	BL	OSAGE BEACH, MO
DTVBL166319					
Undesireds:	KTAJ-TV	D21	DT	LIC	ST. JOSEPH, MO
BLCDDT20060703AAK				180.2 km	
	KATV	D22	DT	LIC	LITTLE ROCK, AR
BLCDDT20090225AAV				332.9	
	KOKI-TV	D22	DT	LIC	TULSA, OK
BLCDDT20021127AGL				285.0	
	KODE-TV	D23	DT	BL	JOPLIN, MO
DTVBL18283				132.6	

	Service area		Terrain-limited		IX-free
Percent IX					
30846.8	766,402	29783.1	753,614	28780.2	736,682
3.37	2.25				

Undesired			Total IX	Unique IX	
Prcnt Unique IX					
KATV D22 DT LIC	208.2		6,144	96.0	751
0.32	0.10				
KOKI-TV D22 DT LIC	691.5		12,789	355.8	5,675
1.19	0.75				
KODE-TV D23 DT BL	458.9		9,007	215.4	3,392
0.72	0.45				