K26KH-D DISPLACEMENT APPLICATION AND MODIFICATION OF CONSTRUCTION PERMIT
CH 25 1.5 kW DIRECTIONAL FACILITY ID 182794
COLUMBIA, MISSOURI
ENGINEERING NARRATIVE AND RF RADIATION ENVIRONMENTAL ANALYSIS
DECEMBER 2021

Proposed Change in Facilities

K26KH-D is an LPTV DTV facility authorized in file number 0000071588. On April 19, 2021 KAMU-TV, facility ID 65583, filed an application for CP to move from CH 8 to CH 27 with an ERP of 1,000 kW at a site 11.3 kM from the authorized K26KH-D site. The K26KH-D CP, file number 0000071588, was granted on April 29, 2019 demonstrating that the CP holder had no control over the full service filing. TVStudy ISIX analysis using the 12212021 LMS database shows that the KOMU-TV facility creates significant new interference well in excess of 2% causing the K26KH-D facility to be displaced.

Interference to proposal scenario 1
18.58% interference received

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K26KH-D	D26	LD	CP	COLUMBIA, MO	BLANK0000071588	
Undesireds:	K26KT-D	D26	LD	CP	ELDON, MO	BLANK0000071733	63.0 km
	K26KU-D	D26	LD	CP	MARSHALL, MO	BNPDTL20090825BXR	73.3
	K26KV-D	D26	LD	CP	SEDALIA, MO	BNPDTL20090825BWL	86.7
	KPLR-TV	D26	DT	LIC	ST. LOUIS, MO	BLANK0000160951	169.3
	KOMU-TV	D27	DT	CP	COLUMBIA, MO	BLANK0000143684	11.3

Service area		Terrain-limited		IX-free		Percent IX	
7184.0	315,766	7111.8	314,959	4371.0	256,435	38.54	18.58

Undesired	Total IX		Unique IX		Prcnt Unique IX	
K26KT-D D26 LD CP	167.6	3,304	90.3	1,109	1.27	0.35
K26KU-D D26 LD CP	741.5	14,412	184.4	5,010	2.59	1.59
K26KV-D D26 LD CP	271.8	2,980	40.0	186	0.56	0.06
KPLR-TV D26 DT LIC	208.8	2,601	48.0	248	0.68	0.08
KOMU-TV D27 DT CP	2296.0	50,437	1684.7	39,858	23.69	12.65

The proposed facility is believed to qualify as a minor change in that no change in transmitter site is proposed and the proposed CH 25 contour lies wholly inside CP noise limited contour.

The proposed antenna system consists of a single Kathrein/Scala horizontally polarized panel antenna model CL-1469B without beam tilt oriented at 0 degrees True. The antenna radiation center is 6.1 meters AGL. Utilizing formula 10 OF OET Bulletin No. 65, Edition 97-01, a value F of 1.0 has been used to calculate the power density 2 meters above ground at the nearest point on the fence surrounding the tower and transmitter building which is 14 meters from the tower at 0 degrees. The maximum power density is 255.6 uw/cm squared calculated for an ERP of 1,500 watts H. polarization. This value is 71.6% of the Public Exposure MPE value of 357 uw/cm squared for CH 25 per section 1.1310 in the major lobe. Based on this analysis it is believed that the proposed facility is in compliance with OET-65 Guidelines.

The applicant will reduce power or cease transmission as required to meet FCC OET-65 Guidelines.
The proposed tower is existing along with the adjacent building, access road and power.

No IX check failures were found in the CH 25 proposal.

TVStudy Report

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Study created: 2021.12.22 16:52:58
Study build station data: LMS TV 2021-12-21
    Proposal: K26KH-D D25 LD CP COLUMBIA, MO
 File number: BLANK0000071588
 Facility ID: 182794
Station data: User record
   Record ID: 1073
     Country: U.S.
Stations potentially affected by proposal:
IX   Call      Chan       Svc Status  City, State              File Number            Distance
No   W18CJ     N18-       TX  LIC     QUINCY, IL               BLTTL20011120AAN       155.4 km
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No	K24IM-D	D24	LD	LIC	KEOSAUQUA, IA	BLDTT20111228AAV	216.3
No	KYCW-LD	D24	LD	LIC	BRANSON, MO	BLANK0000108531	188.4
No	KCTV	D24	DT	LIC	KANSAS CITY, MO	BLANK0000153301	200.2
No	KMOV	D24	DT	LIC	ST. LOUIS, MO	BLANK0000157749	175.7
No	KXNW	D25	DT	LIC	EUREKA SPRINGS, AR	BLANK0000059458	302.1
No	KFDF-CD	D25	DC	LIC	FORT SMITH, AR	BLANK0000064348	414.4
No	KWKB	D25	DT	LIC	IOWA CITY, IA	BLCDT20070130AJQ	335.7
No	WEDK-LD	D25	LD	CP	EFFINGHAM, IL	BLANK0000071856	322.3
No	WEEK-TV	D25	DT	LIC	PEORIA, IL	BLANK0000137499	311.3
No	K25QQ-D	D25	LD	CP	FORT RILEY, KS	BLANK0000153820	380.2
No	KMCI-TV	D25	DT	LIC	LAWRENCE, KS	BLANK0000153576	194.8
No	WDKA	D25	DT	LIC	PADUCAH, KY	BLANK0000087462	332.0
No	KRKG-LP	D25+	LD	APP	LEWISTON, MO	BLANK0000163954	148.1
No	KFKY-LD	D25	LD	LIC	Springfield, MO	BLANK0000136440	192.9
No	K25NG-D	D25	DC	CP	ST. LOUIS, MO	BLANK0000127518	172.6
No	K25NG-D	D25	DC	LIC	ST. LOUIS, MO	BLDTL20130805ABR	179.8
No	K25OG-D	D25	LD	LIC	FALLS CITY, NE	BLANK0000058740	329.7
No	KGCT-CD	D25	DC	LIC	NOWATA, OK	BLDTA20091222AAA	374.5
No	WATN-TV	D25	DT	LIC	MEMPHIS, TN	BLCDT20050628AAP	450.1
No	K26PT-D	D26	LD	CP	COLUMBIA, MO	BLANK0000151289	59.9
No	K26KT-D	D26	LD	CP	ELDON, MO	BLANK0000071733	63.0
No	K26KU-D	D26	LD	CP	MARSHALL, MO	BNPDTL20090825BXR	73.3
No	K26KV-D	D26	LD	CP	SEDALIA, MO	BNPDTL20090825BWL	86.7
No	KCNH-LD	D26	LD	LIC	Springfield, MO	BLANK0000135315	192.9
No	KPLR-TV	D26	DT	LIC	ST. LOUIS, MO	BLANK0000160951	169.3
No	KLMC-LP	N28+	TX	LIC	JEFFERSON CITY, MO	BLTTL20050613AFP	25.2

No non-directional AM stations found within 0.8 km
No directional AM stations found within 3.2 km
Record parameters as studied:

Channel: D25
Mask: Full Service
Latitude: 38 47 28.00 N (NAD83)
Longitude: 92 17 44.00 W
Height AMSL: 280.4 m (Adjusted based on actual ground elevation calculation)
HAAT: 0.0 m

Peak ERP: 1.50 kW
Antenna: KAT CL-1469B 290.0 deg
Elev Pattrn: Generic
49.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	1.50 kW	48.8 m	24.8 km
45.0	0.075	23.6	9.4
90.0	0.000	34.7	2.2
135.0	0.000	52.6	2.7
180.0	0.000	77.6	3.2
225.0	0.000	76.4	3.1
270.0	0.000	84.7	3.3
315.0	0.075	72.8	14.4

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 59 m

Distance to Canadian border: 852.6 km

Distance to Mexican border: 1304.1 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 296.3 degrees Distance: 574.3 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 281.7 degrees Distance: 1118.4 km

Study cell size: 1.00 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%

No IX check failures found.

The foregoing was prepared on behalf of Roseland Broadcasting, Inc. by Clarence M. Beverage of *Communications Technologies, Inc.*, Medford, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.

Clarence M. Beverage
for Communications Technologies, Inc.
Medford, New Jersey
December 22, 2021