

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of PAPPAS TELECASTING OF CENTRAL NEBRASKA, L.P., licensee of full-power digital television station KHGI-DT, Channel 13 in Kearney, Nebraska, in support of its Application for Construction Permit to correct the antenna radiation center above ground. No change in site location, antenna model or effective radiated power is proposed herein.

The licensed antenna radiation center is 341.8 meters above ground. However, as a result of a site survey, the actual height of the antenna's center is 345.1 meters above ground. Antenna height above mean sea level and above average terrain increase by 3.3 meters (approximately 11 feet) as well.

The revised service contours are plotted in Exhibit B. As shown, the proposed 43 dBu city-grade service contour continues to cover all of Kearney. In addition, the increase of 3.3 meters to the antenna height results in an insignificant increase in the 36 dBu service contour of the station, meaning that this proposal should meet the requirements of the current Commission freeze on the filing of digital television modification applications that specify an increase in a station's service contour. However, a waiver of this freeze is requested, if need be, due to the correction of the KHGI-DT antenna height.

An interference study is provided in Exhibit C, and it is important to note that a cell size of 1.0 kilometers and an increment spacing of 0.1 kilometers was used in our study. It concludes that the corrected KHGI-DT facility meets the Commission's interference requirements to all co-channel and adjacent-channel full-power and Class A LPTV stations.

EXHIBIT A

A power density calculation appears as Exhibit E.

Since no change in the overall height or location of the existing KHGI-DT supporting structure is proposed herein, the FAA has not been notified of this correction. The FCC issued Antenna Structure Registration Number 1026157 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read 'K. T. Fisher', with a stylized flourish at the end.

KEVIN T. FISHER

May 22, 2015

**CONTOUR POPULATION
2010 U.S. CENSUS DATA**
43 DBU : 212,453 (91,849 HH)
36 DBU : 234,024 (103,054 HH)

SMITHANDFISHER

**36 DBU FCC
CONTOUR**

**43 DBU FCC
CONTOUR**

**EXHIBIT B
PREDICTED SERVICE CONTOURS
KHGI-DT
CH. 13 - KEARNEY, NEBRASKA**

Scale 1:1,150,000

0 8 16 24 mi

INTERFERENCE STUDY
PROPOSED KHGI-DT
CHANNEL 13 – KEARNEY, NEBRASKA

The instant proposal specifies an ERP of 19.8 kW (omnidirectional) at 338 meters above average terrain, which we have determined to be allowable under the FCC's interference standards with respect to all pertinent co-channel and adjacent-channel DTV facilities.

In evaluating the interference effect of this proposal, we have relied upon the V-Soft Communications "SunDTV" computer program, which has been found generally to duplicate the FCC's program. In conducting our studies, we employed a cell size of 1.0 kilometer and an increment spacing of 0.1 kilometer along each radial. In addition, we utilized the 2000 U.S. Census. A summary of the results of the interference study is provided in Exhibit C-2. As shown, the proposed KHGI-DT facility would not cause significant interference to the service population of any digital television facility.

The same Longley-Rice interference study also reveals that the proposed KHGI-DT facility does not cause interference to any Class A low power television station.

KHGI_DT_summary.txt

Summary Study

Percent allowed new interference: 0.500
 Percent allowed new interference to non Class A LPTV: 2.000
 Census data selected 2000
 Data Base Selected
 ./data_files/pt_tvdb.sff

WARNING WARNING WARNING

The following list of station records has been excluded from the analysis due to the fact that they have the same state, city and channel as the proposed station - This could cause the program to not find a potential fail situation

You can force the program to include these records by setting the state of the proposed record to ZZ and re-running the analysis

KHGI-TV 13 KEARNEY NE BLCDT 20091019AFG

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 05-20-2015 Time: 14:38:19

Record Selected for Analysis

KHGI-TV- USERRECORD-01 KEARNEY NE US
 Channel 13 ERP 19.8 kW HAAT 337. m RCAMSL 00974 m
 Latitude 040-39-28 Longitude 0098-52-04
 Status APP Zone 2 Border Site number: 01
 Dir Antenna Make usr Model USRPAT01 Beam tilt N Ref Azimuth 0.
 Last update Cutoff date Docket
 Comments
 Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 0.10 km

Facility (site # 01) meets maximum height/power limits

Site number	1
Azimuth	ERP HAAT 36.0 dBu F(50,90)
(Deg)	(kW) (m) (km)
0.0	19.800 336.3 100.4
45.0	19.800 352.1 101.7
90.0	19.800 350.9 101.6
135.0	19.800 341.4 100.8
180.0	19.800 331.1 99.9
225.0	19.800 325.3 99.5

KHGI_DT_summary.txt

270.0	19.800	329.8	99.8
315.0	19.800	331.3	100.0

Evaluation toward Class A Stations from site # 01

No Spacing violations or contour overlap
to Class A stations from site # 01

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

KHGI-TV- 13 KEARNEY NE USERRECORD01 Site # 01

and station

SHORT TO: KHGI-TV 13 KEARNEY NE DTVPLN DTVP0442
40 -39-28 98 -52-04
Req. separation 273.6 Actual separation 0.0 Short 273.6 km

SHORT TO: KHGI-DR 13 KEARNEY NE BPRM 20080715AFI
040-39-28 0098-52- 4
Req. separation 273.6 Actual separation 0.0 Short 273.6 km

Checks to Site Number 01

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

KHGI_DT_summary.txt

Proposed Station			
Channel	Call	City/State	ARN
13	KHGI-TV-	KEARNEY NE	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
12	KUON-TV	LINCOLN NE	209.6	LIC	BLEDT	20090406AIP
12	KSNK	MCCOOK NE	180.7	LIC	BLCDT	20031017ABP
13	KUPK	GARDEN CITY KS	368.5	LIC	BLCDT	20090226ABS
13	WIBW-TV	TOPEKA KS	302.6	LIC	BLCDT	20110111ABO
13	KTNE-TV	ALLIANCE NE	373.8	LIC	BLEDT	20090225ABJ
13	KHGI-DR	KEARNEY NE	0.0	APP	BPRM	20080715AFI
13	KPLO-TV	RELIANCE SD	367.6	LIC	BLCDT	20131113AIL
13	KSFY-TV	SIOUX FALLS SD	371.6	LIC	BLCDT	20090223ABE

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Study of this proposal found the following interference problem(s):

None

POWER DENSITY CALCULATION

PROPOSED KHGI-DT
CHANNEL 13 – KEARNEY, NEBRASKA

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Kearney facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 19.8 kW, an antenna radiation center 345 meters above ground, and assuming a vertical relative field value of 20 percent at the steeper elevation angles for the licensed G.E. antenna, maximum power density two meters above ground of 0.00022 mW/cm^2 is calculated to occur in the vicinity of the base of the tower. Since this value is only 0.1 percent of the 0.20 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 13 (210-216 MHz), a grant of this proposal may be considered a minor environmental action with respect to public and occupational ground-level exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.