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**Engineering Statement
Minor Modification of K03IJ-D
Channel 3 at College Station, TX
January 2023**

I. Background

This Engineering Statement has been prepared on behalf of Bridge News, LLC, licensee of low-power station K03IJ-D College Station. This material has been prepared in connection with an application for minor modification of construction permit 0000184634.

II. Interference Study

Study has been made of all cochannel and adjacent-channel facilities in the vicinity of the proposed operation, including a detailed Longley-Rice interference study to demonstrate that the proposed operation will not cause interference to any authorized or pending proposed facilities. This study was performed using the Commission's TVStudy software.

This study was conducted using a study cell size of 0.5 km and a terrain extraction increment of 0.1 km.

The MX situation indicated by the study is interference which will be received by K03IJ-D from a pending application for modification of KZHO-LD. This is therefore no impediment to grant of this application.

The results of this study indicate that the proposed facility is predicted to cause zero additional interference to any of the listed stations, beyond the allowed values of 0.5% to full-power and Class A stations, and 2.0% to low-power stations. Based on the foregoing interference study, it is believed that the proposed facility can operate without risk of interference to other stations.

Study created: 2024.01.23 15:01:36

Study build station data: LMS TV 2024-01-21

Proposal: K03IJ-D D3 LD APP COLLEGE STATION, TX
File number: K03IJ-1062868-2730W
Facility ID: 183495
Station data: User record
Record ID: 1577
Country: U.S.

Build options:

Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KLNK-LD	D2	LD	LIC	GROVETON, TX	BLANK0000121226	99.2 km
No	KLNK-LD	D2	LD	CP	GROVETON, TX	BLANK0000132752	109.1
No	KNCD-LD	N2z	TX	LIC	NACOGDOCHES, TX	BLTVL19930430IA	175.6
No	KLAO-LD	D3	LD	LIC	CORPUS CHRISTI, TX	BLDVL20121227AEF	333.4
No	KLAO-LD	D3	LD	CP	CORPUS CHRISTI, TX	BDISDVL20110901AAA	333.4
No	KODF-LD	D3	LD	LIC	Dallas, TX	BLANK0000113889	242.2
Yes	KZHO-LD	D3	LD	APP	HOUSTON, TX	BLANK0000195036	102.5
Yes	KZHO-LD	D3	LD	LIC	HOUSTON, TX	BLANK0000158409	109.1
Yes	K03JE-D	D3	LD	LIC	VICTORIA, TX	BLANK0000199113	176.0
No	KAHO-LD	D4	LD	LIC	WOODVILLE, TX	BLANK0000005451	102.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D3
Mask: Simple
Latitude: 30 33 16.50 N (NAD83)
Longitude: 96 1 52.30 W
Height AMSL: 314.5 m
HAAT: 0.0 m
Peak ERP: 2.73 kW
Antenna: Omnidirectional
Elev Pattn: Generic

43.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	2.73 kW	227.4 m	61.3 km
45.0	2.73	205.6	59.7
90.0	2.73	208.0	59.9
135.0	2.73	204.1	59.6
180.0	2.73	227.4	61.3
225.0	2.73	247.5	62.7
270.0	2.73	246.9	62.7
315.0	2.73	232.4	61.7

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 225 m

Distance to Canadian border: 1708.2 km

Distance to Mexican border: 472.9 km

Conditions at FCC monitoring station: Kingsville TX
Bearing: 208.0 degrees Distance: 390.0 km

Proposal is not within the West Virginia quiet zone area

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Conditions at Table Mountain receiving zone:
Bearing: 324.5 degrees Distance: 1349.2 km

Study cell size: 0.50 km
Profile point spacing: 0.10 km

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

---- Below is IX received by proposal K03IJ-1062868-2730W ----

**MX with BLANK0000195036 APP scenario 1, 15.20% interference received
Proposal receives 24.55% interference from scenario 2

III. RF Exposure Study

The power density calculations shown below were made using the techniques outlined in OET Bulletin No. 65. "Ground level" calculations in this report have been made at a reference height of 2 meters above ground to provide a worst-case estimate of exposure for persons standing on the ground in the vicinity of the tower. The equation shown below was used to calculate the ground level power density figures from each antenna.

$$S(\mu W / cm^2) = \frac{33.4 \times AdjERP(Watts)}{D^2}$$

Where: *AdjERP(Watts)* is the maximum lobe effective radiated power times the element pattern factor times the array pattern factor.

D is the distance in meters from the center of radiation to the calculation point.

Power density levels produced by the proposed facility were calculated for an elevation of 2 meters above ground (i.e. 211.4 meters below the antenna radiation center), assuming that the antenna will radiate 100% power straight down. Under this worst-case assumption, the highest calculated power density from the proposed antenna alone occurs at the base of the antenna support structure. At this point the power density is calculated to be 2.0 $\mu W/cm^2$, which is 1% of 200 $\mu W/cm^2$ (the FCC maximum for uncontrolled environments at the Channel 3 frequency).

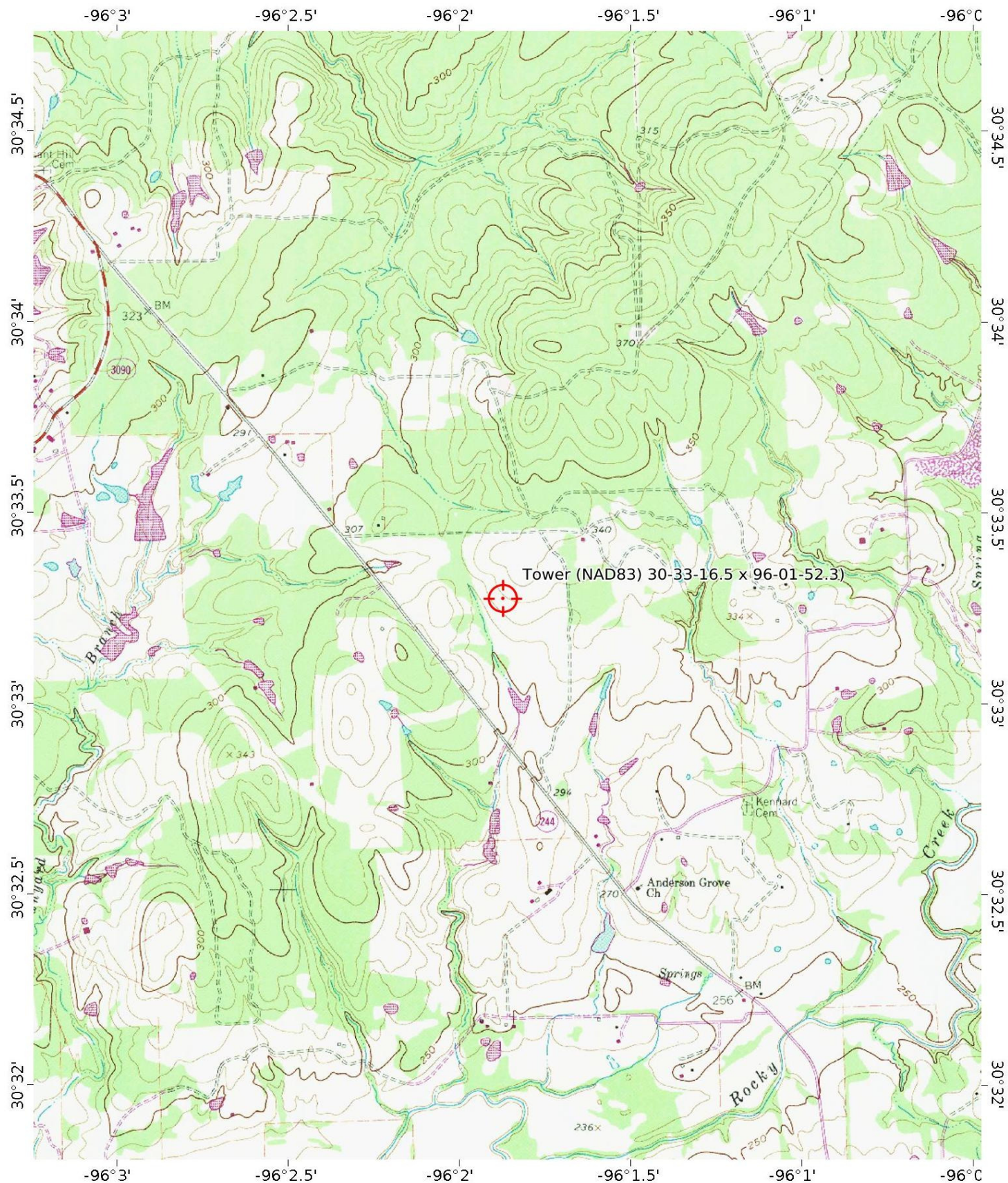
These calculations show that the maximum calculated power density produced at two meters above ground level by the proposed operation alone is less than 5% of the applicable FCC exposure limit at all locations between 1 and 500 meters from the base of the antenna support structure. Section 1.1307 of the Commission's Rules exempts applications for new facilities or modifications to existing facilities from the requirement of preparing an environmental assessment when the

calculated emissions from the applicant's proposed facility are predicted to be less than 5% of the applicable FCC exposure limit. Therefore, the proposed facility is in compliance with Section 1.1301 *et seq* and no further analysis of RF exposure at this site is required in this application.

Pursuant to OET Bulletin No. 65, all station personnel and contractors are required to follow appropriate safety procedures before any work is commenced on the antenna tower, including reduction in power or discontinuance of operation before any maintenance work is undertaken. The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency exposure in excess of FCC guidelines.

January 23, 2024

Erik C. Swanson, P.E.



Mercator Projection
WGS84

UTM Zone 14R



0.5 1.0 1.5 2.0 2.5 km

0.5 1.0 1.5 mi

Scale 1:24000 1 inch = 2000 feet



MN
2.2°

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