

ENGINEERING STATEMENT

IN SUPPORT OF

MINOR MODIFICATION OF A LICENSED DIGITAL TRANSLATOR FACILITY

K09AI-D

LAS VEGAS, NM

Background

Hearst Properties Inc. (Hearst) is the licensee of digital television translator station K09AI-D (BLDTV-20100622ABZ, Facility ID. 53882) near Las Vegas, NM. The station currently operates on Ch. 09 with an ERP of 0.3 kW. Hearst, in the instant application, is seeking to increase the K09AI-D ERP from 0.3 kW to 0.77 kW. All other facility parameters would remain the same as currently authorized.

Site and Tower

The tower is located at 35° 36' 12.9" N and 105° 15' 32.3" W (NAD83). The overall height of the tower is 25.0m AGL and it passes the TOWAIR program. Therefore, the tower does not require an ASR, nor notification to the FAA.

KOAT intends to reuse the existing antenna which is side-mounted on the tower.

Note, during the process of preparing the modification application, it was discovered that the original analog translator construction permit application contained typographical errors in the tower coordinates. The current K09AI-D license list the tower coordinates as:

35° 36' 16.3" N (NAD83)
105° 15' 39.4" W

The actual coordinates of the tower are:

35° 36' 12.9" N (NAD83)
105° 15' 32.3" W

The discrepancy has been corrected in the application.

The site will remain the same as that of the licensed digital facility, as will the height of the antenna radiation center.

Antenna and Power

Hearst is proposing to continue using the licensed Kathrein/Scala DRV-1/2HW directional antenna for the facility with a horizontally polarized ERP of 0.77 kW (no vertical polarization component).

Interference

An interference check study was run using the FCC TVStudy software (Version 2.2.5) for the proposed facility parameters (including the use of a Simple Mask). **The study was run using a default cell size parameter of 1.0 km, but a higher terrain profile resolution of 0.1 km.** The results of the study (copy attached hereto) show that potential interference is not predicted to exceed 0.49% to any full-service DTV or Class A stations or 1.99% to any digital low power stations as required by the Commission's Rules.

Environmental/RFR

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation. Any other non-RFR conditions that might require the preparation of an EA are beyond the scope of this report.

The location of the proposed facility is assumed to currently be “in compliance” with FCC guidelines for human exposure to RFR (as defined in OET-65). The worst-case ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.007146 mW/cm², which is less than 5% of the MPE for public exposure (0.2 mW/cm²) at Ch. 9 (186-192 MHz). Per Section 1.1307(b) of the FCC Rules, the operation is categorically excluded from taking corrective action in areas with levels above the MPE limit since the contribution to the overall RFR from the facility is less than 5%.

Hearst agrees to comply with the Commission’s requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will be trained on RFR issues and encouraged to wear personal RFR monitors when on the structure.

Certification

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.



Benjamin Pidek, P.E.
August 16, 2022

Attached:
TVStudy Interference Check Report

TVStudy TV Interference Check Report for K09AI-D on Ch. 09

Study created: 2022.08.16 20:53:21

Study build station data: LMS TV 2022-08-12

Proposal: K09AI-D D9 LD LIC LAS VEGAS, NM
File number: K09AI_Max_0_77k_CoordCorr
Facility ID: 53882
Station data: User record
Record ID: 214
Country: U.S.

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

Search options:
Non-U.S. records included

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	DK08ES	D8	LD	APP	RED RIVER, NM	BDFCDTV20120604AED	120.5 km
Yes	KNMD-TV	D8	DT	LIC	SANTA FE, NM	BLANK0000137830	116.3
No	K09DM-D	D9	LD	LIC	CORTEZ, CO	BLDTV20110329ABJ	322.0
No	KUSA	D9	DT	LIC	DENVER, CO	BLANK0000129226	458.7
No	K09YK-D	D9	LD	LIC	DURANGO, PURGATORY, CO	BLDVL20110802ABN	299.3
No	K09TH-D	D9	LD	LIC	GUNNISON, CO	BLDTV20091021ABR	356.3
No	K09PJ-D	D9	LD	LIC	OURAY, CO	BLDTV20101013ADN	343.2
No	K09WB-D	D9	LD	LIC	POWDERHORN, CO	BLDTV20110913AAY	342.6
No	K09DY-D	D9	LD	LIC	WESTCLIFFE, CO	BLDTV20120615ACG	280.7
No	K09EP-D	D9	LD	LIC	GRANTS, ETC., NM	BLANK0000118136	245.5
No	K09EP-D	N9	TX	LIC	GRANTS, ETC., NM	BLTTV526	245.5
No	K09KJ-D	D9	LD	LIC	TIERRA AMARILLA, NM	BLDTV20111014ABX	187.7
No	KACV-TV	D9	DT	LIC	AMARILLO, TX	BLEDT20111222AXJ	312.4
No	KWES-TV	D9	DT	LIC	ODESSA, TX	BLANK0000194125	458.0
Yes	KCHF	D10	DT	LIC	SANTA FE, NM	BLANK0000004531	116.1
Yes	KCHF	D10	DT	APP	SANTA FE, NM	BLANK0000159381	116.3

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D9
Mask: Simple
Latitude: 35 36 12.90 N (NAD83)
Longitude: 105 15 32.30 W
Height AMSL: 2200.0 m
HAAT: 0.0 m
Peak ERP: 0.770 kW
Antenna: SCA-DRV-1/2HW (ID 99965) 290.0 deg
Elev Pattn: Generic

48.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.391 kW	127.6 m	35.2 km
45.0	0.027	181.3	23.4
90.0	0.014	174.4	19.9
135.0	0.006	232.0	18.9
180.0	0.037	223.1	27.5
225.0	0.481	112.9	35.0
270.0	0.440	22.9	19.4

315.0 0.434 -32.3 19.3

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 130 m

Distance to Canadian border: 1488.9 km

Distance to Mexican border: 440.5 km

Conditions at FCC monitoring station: Douglas AZ
Bearing: 223.0 degrees Distance: 611.2 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 0.1 degrees Distance: 501.8 km

Study cell size: 1.00 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%

No IX check failures found.