

ENGINEERING STATEMENT

IN SUPPORT OF

MINOR MODIFICATION OF A LICENSED DIGITAL TRANSLATOR FACILITY

K23JD-D

COLFAX, NM

Background

Hearst Properties Inc. (Hearst) is the licensee of digital television translator station K23JD-D (File No. BLDTT-20100716ABZ, Facility ID. 53918) near Colfax, NM. The station currently operates on Ch. 23 with an ERP of 1.0 kW. Hearst, in the instant application, is seeking to increase the K23JD-D ERP from 1.0 kW to 4.8 kW and change the mask filter from simple to full-serive. All other facility parameters would remain the same as currently authorized.

Site and Tower

The tower is located at 36° 33' 34.6" N and 105° 11' 41.8" W (NAD83). The overall height of the tower is 19.8m 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 K23JR-D license list the tower coordinates as:

36° 33' 36.1" N (NAD83)
105° 11' 40.0" W

The actual coordinates of the tower are:

36° 33' 34.6" N (NAD83)
105° 11' 41.8" 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 SL-8 omnidirectional antenna for the facility with a horizontally polarized ERP of 4.8 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 Full-Service 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. The record for the K44CG Construction Permit (LMS File No. 0000053996) was removed from the study since the station's license has been cancelled.

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 0.041719 mW/cm², which is significantly less than the MPE limit for public exposure (0.351333 mW/cm²) at Ch. 23.

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.
December 24, 2022

Attached:
TVStudy Interference Check Report

TVStudy TV Interference Check Report for K23JD-D on Ch. 23

Study created: 2022.12.24 13:43:00

Study build station data: LMS TV 2022-12-23

Proposal: K23JD-D D23 LD APP COLFAX, NM
File number: K23JD_4_8kW_Max_FSM
Facility ID: 53918
Station data: User record
Record ID: 256
Country: U.S.

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

Search options:
Non-U.S. records included

Individual records excluded:
0000053996 DK44CG-D D23 LD APP CAPULIN, ETC., NM BLANK0000053996

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KXRM-TV	D22	DT	LIC	COLORADO SPRINGS, CO	BLCDDT20030702ABE	244.7 km
No	KLUZ-TV	D22	DT	LIC	ALBUQUERQUE, NM	BLCDDT20090618ACG	187.7
No	K22GE-D	N22-	TX	LIC	DULCE, NM	BLTT20020326ABE	165.0
No	K22GE-D	D22	LD	LIC	DULCE, NM	BLANK0000192312	165.0
Yes	K38EC-D	D22	LD	LIC	EAGLES NEST, NM	BLANK0000063652	0.0
No	K22EW-D	D22	LD	LIC	MORA, NM	BLANK0000078960	68.1
No	K22EW-D	N22	TX	LIC	MORA, NM	BLTT19970724JD	68.1
No	KZCS-LD	N23z	TX	LIC	COLORADO SPRINGS, CO	BLTTTL20021218AAJ	244.6
No	K23LH-D	D23	LD	LIC	CORTEZ, CO	BLDDTT20110331AEZ	275.4
No	K23GF-D	D23	LD	LIC	DOVE CREEK, ETC, CO	BLDDTT20120615ABH	355.2
No	KPDD-LD	D23	LD	LIC	Evergreen, CO	BLANK0000177326	347.3
No	KREG-TV	D23	DT	LIC	GLENWOOD SPRINGS, CO	BLANK0000007830	370.4
No	K23KN-D	D23	LD	LIC	LAS ANIMAS, CO	BLDDTT20110509ADA	254.0
No	K23NW-D	D23	LD	LIC	MONTROSE, CO	BLANK0000062960	329.6
No	K23OR-D	D23z	LD	LIC	PAGOSA SPRINGS, CO	BLANK0000080596	183.4
No	K23DX-D	D23	LD	LIC	PITKIN, CO	BLDDTT20101129AMF	255.9
No	K23OU-D	D23	LD	LIC	PUEBLO, CO	BLANK0000121883	208.1
Yes	K23NF-D	D23	LD	LIC	ROMEO, ETC., CO	BLANK0000062907	80.7
No	DDK45KT-D	D23	LD	APP	SARGENTS, CO	BLANK0000054028	237.0
No	KCDO-TV	D23	DT	LIC	STERLING, CO	BLCDDT20100127ADD	401.4
Yes	KTVS-LD	D23	LD	LIC	ALBUQUERQUE, NM	BLANK0000078139	187.5
No	K23KL-D	D23	LD	LIC	FARMINGTON, NM	BLDDTT20100702BSP	271.2
No	K23FE-D	D23	LD	LIC	GALLUP, NM	BLDDTT20100621ABK	330.6
No	K23NN-D	D23	LD	LIC	LAS VEGAS, NM	BLANK0000062951	106.4
No	K2300-D	D23	LD	LIC	MOON RANCH, NM	BLANK0000078049	169.2
Yes	K230I-D	D23	LD	LIC	TUCUMCARI, NM	BLANK0000156877	207.7
No	KXAD-LD	D23	LD	CP	AMARILLO, TX	BLANK0000188794	331.3
No	DK38BU-D	D23	LD	APP	GRUVER, TX	BLANK0000053123	342.8
No	KLCW-TV	D23	DT	LIC	WOLFFORTH, TX	BLANK0000074584	454.8
No	K23JC-D	D23	LD	LIC	MONTEZUMA CRK/ANETH, UT	BLDDTT20091222AMH	372.2
No	KRDO-TV	D24	DT	LIC	COLORADO SPRINGS, CO	BLCDDT20060329AAW	244.8
No	KNAT-TV	D24	DT	LIC	ALBUQUERQUE, NM	BLCDDT20130710AAN	187.6
No	K24IY-D	D24	LD	LIC	RATON, NM	BLANK0000171109	71.0
No	K24ML-D	D24	LD	LIC	TAOS, NM	BLANK0000152059	36.0

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D23
Mask: Full Service
Latitude: 36 33 34.60 N (NAD83)
Longitude: 105 11 41.80 W
Height AMSL: 3416.4 m
HAAT: 0.0 m
Peak ERP: 4.80 kW
Antenna: Omnidirectional
Elev Pattn: Generic
Elec Tilt: 1.75

49.7 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	4.80 kW	326.2 m	52.4 km
45.0	4.80	820.9	66.5
90.0	4.80	1060.1	70.8
135.0	4.80	591.1	61.7
180.0	4.80	400.3	55.7
225.0	4.80	827.2	66.6
270.0	4.80	573.1	61.3
315.0	4.80	656.0	63.3

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 657 m

Distance to Canadian border: 1382.7 km

Distance to Mexican border: 544.8 km

Conditions at FCC monitoring station: Douglas AZ
Bearing: 217.4 degrees Distance: 696.1 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 359.6 degrees Distance: 395.5 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.