

ENGINEERING STATEMENT

IN SUPPORT OF

MINOR MODIFICATION OF A LICENSED DIGITAL TRANSLATOR FACILITY

K31MW-D

RUIDOSO, NM

Background

Hearst Properties Inc. (Hearst) is the licensee of digital television translator station K31MW-D (LMS File No. 0000013232, Facility ID. 198239) near Ruidoso, NM. The station currently operates on Ch. 31 with an ERP of 0.1 kW. Hearst, in the instant application, is seeking to increase the K31MW-D ERP from 0.1 kW to 1.5 kW and change the antenna from a Scala SL-8 to a Kathrein K723147. All other facility parameters would remain the same as currently authorized.

Site and Tower

The tower is located at 33° 24' 16.2" N and 105° 46' 54.3" W (NAD83). The overall height of the tower is 57.9m AGL and it passes the TOWAIR program. Therefore, it does not require an ASR, nor notification to the FAA.

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 K31MW-D license lists the tower coordinates as:

33° 24' 14.2" N (NAD83)
105° 46' 56.9" W

The actual coordinates of the tower are:

33° 24' 16.2" N (NAD83)
105° 46' 54.3" 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 change the antenna from a Scala SL-8 to a Kathrein K723147 antenna and increase the ERP to 1.5 kW (horizontal polarization only).

Interference

An interference study was conducted of the proposed facility parameters using the FCC TVStudy software (Version 2.2.5) with the default parameters. The results of the study (copy attached hereto) show that potential interference from the proposed facility is not predicted to exceed 0.49% to any full-service DTV or Class A stations or 1.99% to any low power stations as required by the Commission's Rules.

Environmental/RFR

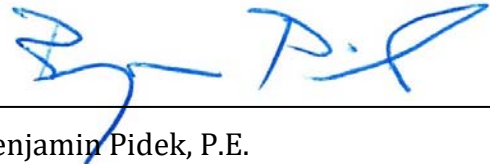
This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation. Any other non-RFR conditions that might require the preparation of an EA are beyond the scope of this report.

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 0.003521 mW/cm^2 , which is less than 5% of the MPE for public exposure (0.383333 mW/cm^2) at Ch. 31. 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.
April 9, 2024

Attached:
TVStudy Interference Check Report

TVStudy TV Interference Check Report for K31MW-D on Ch. 31

Study created: 2024.04.09 21:18:18

Study build station data: LMS TV 2024-04-09

Proposal: K31MW-D D31 LD LIC RUIDOSO, NM
File number: K31MW-K712147r111-CdMod
Facility ID: 198239
Station data: User record
Record ID: 43
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	K24CT-D	N24	TX	LIC	ALAMOGORDO, NM	BLTTL19980804JD	64.5 km
No	DKAPT-LP	N29-	TX	APP	ALAMOGORDO, NM	BLTTL19911205JF	64.6
No	K30QI-D	D30	LD	LIC	ALAMOGORDO, NM	BLANK0000071522	60.7
Yes	K30GM-D	D30	LD	LIC	CAPITAN/RUIDOSO, NM	BLDTT20111229AAS	0.1
No	KWPL-LD	D30	LD	LIC	SANTA FE, NM	BLANK0000190816	206.4
Yes	K31GJ-D	D31	LD	LIC	ALAMOGORDO, NM	BLDTT20110825ACB	64.7
Yes	KNME-TV	D31	LD	LIC	ALBUQUERQUE, NM	BLEDT20110908AAS	154.7
No	KNME-TV	D31	LD	LIC	ALBUQUERQUE, NM	BLANK0000068655	229.1
Yes	K31DR-D	D31	LD	LIC	CABALLO, NM	BLANK0000004964	142.5
No	K31KB-D	D31	LD	LIC	DEMING, NM	BLDTT20090709AKL	217.3
No	K31NZ-D	D31	LD	LIC	Eagle Nest, NM	BLANK0000081289	354.7
No	K31HB-D	D31	LD	LIC	GALLINA, NM	BLDTT20110613ABB	325.6
No	DK31HQ	D31	LD	APP	LORDSBURG, NM	BDFCDTT20090824ACZ	262.8
No	K31EO-D	D31	LD	LIC	MORA, NM	BLDTT20110804AAC	286.7
No	K31OX-D	D31	LD	LIC	RAMAH, NM	BLANK0000068654	293.4
Yes	K31GS-D	D31	LD	LIC	ROSWELL, NM	BLDTT20060111AAR	130.0
No	K31NB-D	D31	LD	LIC	SANTA FE, NM	BLANK0000055213	281.3
No	K31JR-D	D31	LD	LIC	THOREAU, NM	BLDTT20091207ACB	321.6
No	K31KJ-D	D31	LD	LIC	BIG SPRINGS, TX	BLDTT20121010ABK	424.7
No	KEYU	D31	DT	LIC	BORGER, TX	BLANK0000238380	417.7
No	KLBK-TV	D31	DT	LIC	LUBBOCK, TX	BLANK0000078650	363.0
No	DDK31MX-D	D31-	LD	APP	Lubbock, TX	BLANK0000037494	362.7
No	KOSA-TV	D31	DT	CP	ODESSA, TX	BLANK0000213333	345.2
No	K32OE-D	D32	LD	LIC	ALAMOGORDO, NM	BLANK0000078907	64.6
No	KUPT-LD	D32	LD	LIC	ALBUQUERQUE, NM	BLANK0000076650	210.4
No	KENW	D32	DT	LIC	PORTALES, NM	BLEDT20030219ADP	252.9
No	XHJCI	D30	DT	LIC	CIUDAD JUAREZ, CH	BLANKBPFS20140507AAK	199.8
No	XHCTCJ	D31	DT	LIC	CIUDAD JUAREZ, CH	BLANKBPFS20160525AAP	200.5
No	LICITACIOND31		DT	LIC	SAN BUENAVENTURA, CH	BLANKBPFS20090331ADP	426.8
No	XHIJ	D32	DT	LIC	CIUDAD JUAREZ, CH	BLANKBPFS20160304AAF	200.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D31
Mask: Simple
Latitude: 33 24 16.20 N (NAD83)
Longitude: 105 46 54.30 W
Height AMSL: 3334.3 m

HAAT: 0.0 m
Peak ERP: 1.00 kW
Antenna: KAT K723147-TD 111.0 deg
Elev Pattn: Generic

50.4 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.002 kW	794.5 m	17.2 km
45.0	0.055	992.1	39.0
90.0	0.733	1006.4	55.8
135.0	0.667	1015.8	55.4
180.0	0.042	682.7	32.9
225.0	0.003	726.8	18.3
270.0	0.002	1172.8	20.2
315.0	0.001	910.8	16.6

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 913 m

Distance to Canadian border: 1733.4 km

**Proposal is within coordination distance of Mexican border
Distance to Mexican border: 192.8 km

Conditions at FCC monitoring station: Douglas AZ
Bearing: 240.8 degrees Distance: 420.3 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 3.4 degrees Distance: 747.7 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%

---- Below is IX received by proposal K31MW-K712147r111-CdMo ----

Proposal receives 10.76% interference from scenario 1
No IX check failures found.