



ENGINEERING STATEMENT

IN SUPPORT OF

APPLICATION FOR DISPLACEMENT OF DIGITAL TRANSLATOR

K45DH-D

DURANGO, CO

Background

Hearst Properties Inc. (Hearst) is the licensee of digital television translator station K45DH-D (BLDTT-20100625AAQ, Facility ID. 53923) near Durango, CO. The station currently operates on Ch. 45, which is outside the new core of channels allocated for television broadcasting in the US (Ch. 2-36) following the results of the 2016/2017 Incentive Auction. The Commission has opened a Special Displacement Window for LPTV/translator stations that were displaced as a result of the Incentive Auction repacking process and Hearst is applying to displace K45DH-D to Ch. 24.

Site and Tower

The tower is located at 37° 20' 22.5" N and 107° 49' 28.3" W (NAD83). The overall height of the tower is 17.5m AGL and, therefore, it does not require an ASR, nor notification to the FAA. The transmitting antenna will be side-mounted. This is the same site and tower that is specified in the current K45DH-D authorization.

**PROVIDING COMMUNICATION
SYSTEMS ENGINEERING**

CORPORATE OFFICE
1475 NORTH 200 WEST
NEPHI, UT 84648

TEL: (435) 623-8601
FAX: (435) 623-8610

REGIONAL OFFICE
6197 MILLER RD.
SWARTZ CREEK, MI 48473

TEL: (810)-226-0750



Note, during the process of preparing the displacement application, it was discovered that the original construction permit application for the K45DH-D digital low power facility contained typographical errors in the tower coordinates and site elevation which were listed as:

Tower Coordinates:	37° 20' 18.0" N (NAD27)
	107° 49' 23.0" W
Site Elevation AMSL:	2633m

The actual coordinates of the tower and site elevation are:

Tower Coordinates:	37° 20' 22.5" N (NAD83)
	107° 49' 28.3" W
Site Elevation AMSL:	2739m

These discrepancies have been corrected on the displacement application.

Antenna and Power

The proposed antenna is a Scala SL-8 omni-directional radiator. The radiation center of the antenna will be at a height of 14.0m AGL (2753.0m AMSL). The ERP will be 0.8 kW and the 51 dBu F(50,90) contour will completely encompass the area of Durango, CO. The facility will utilize a stringent mask filter.

Interference

An interference study was conducted of the proposed facility parameters using the FCC TVStudy software (Version 2.2.4). 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 low power stations as required by the Commission's Rules.

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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 post-incentive auction 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 0.011601 mW/cm², which is less than 5% of the MPE for public exposure (0.355333 mW/cm²) at Ch. 24 (530-536 MHz). The contribution to the overall RFR from the proposed facility is negligible and, therefore, the site will remain “in compliance” with FCC guidelines.

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.

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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.

A handwritten signature in black ink, appearing to read "Ben Pidek", is written over a horizontal line.

Benjamin L. Pidek, P.E.
February 5, 2018

Attached:
TVStudy Interference Check Report

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TVStudy TV Interference Check Report for K45DH-D on Ch. 24

Study created: 2018.02.05 10:41:45

Study build station data: LMS TV 2018-02-01 (16)

Proposal: K45DH-D D24 LD LIC DURANGO, CO
 File number: K45DH-C24-08k-2753m-T
 Facility ID: 53923
 Station data: User record
 Record ID: 853
 Country: U.S.

Build options:

Protect pre-transition records not on baseline channel
 Protect baseline records from LPTV

Search options:

Non-U.S. records included

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K22GE	N22-	TX	LIC	DULCE, NM	BLTT20020326ABE	85.4 km
Yes	K23LH-D	D23	LD	LIC	CORTEZ, CO	BLDTT20110331AEZ	27.4
No	K23GF-D	D23	LD	LIC	DOVE CREEK, ETC, CO	BLDTT20120615ABH	106.6
No	K23GF-D	D23	LD	CP	DOVE CREEK, ETC, CO	BPDTT20130318AFQ	150.6
No	K49JW-D	D23	LD	APP	ROMEO, ETC., CO	BLANK0000032475	168.7
No	K23KL-D	D23	LD	LIC	FARMINGTON, NM	BLDTT20100702BSP	82.6
No	K23KC-D	D23	LD	LIC	BLUFF, ETC, UT	BLDTT20140520AIL	153.1
No	K23JC-D	D23	LD	LIC	MONTEZUMA CRK/ANETH, UT	BLDTT20091222AMH	129.9
No	NEW	D24	LD	APP	ASPEN, CO	BNPDTL20090825BXI	226.7
No	K24HQ-D	D24	LD	LIC	BOULDER, CO	BLANK0000034173	369.0
No	K24LQ-D	D24	LD	LIC	COLLBRAN, CO	BLDTT20141217ABN	211.8
No	KRDO-TV	D24	DT	LIC	COLORADO SPRINGS, CO	BLCDDT20060329AAW	302.9
Yes	K24CH-D	D24	LD	LIC	CORTEZ, ETC, CO	BLDTT20090522ACF	28.7
No	K24JO-D	D24	LD	LIC	CRAWFORD, CO	BLDTT20110728AIK	153.6
No	K24KR-D	D24	LD	LIC	JACKS CABIN, CO	BLDTT20120413ABE	176.6
Yes	KNAT-TV	D24	DT	LIC	ALBUQUERQUE, NM	BLCDDT20130710AAN	266.5
Yes	K24IV-D	D24	LD	LIC	FARMINGTON, NM	BLDTL20120522ABH	101.6
No	K24IY-D	D24	LD	LIC	RATON, NM	BLDTL20130225ADX	311.3
No	K24IO-D	D24	LD	LIC	FERRON, UT	BLDTT20100107ABT	349.4
No	K24IN-D	D24	LD	LIC	GREEN RIVER, UT	BLDTT20100107ABA	274.9
No	K24IP-D	D24	LD	LIC	HUNTINGTON, UT	BLDTT20100107ABI	353.4
No	K24FI	N24	TX	LIC	ORANGEVILLE, UT	BLTT20030806ABM	356.4
Yes	K25LT-D	D25	LD	LIC	CORTEZ, CO	BLDTT20110331AFB	27.4
Yes	K25GE-D	D25	LD	LIC	DURANGO, CO	BLDTT20111104ALO	0.2
No	K25FZ	D25	LD	CP	GRAND JUNCTION, CO	BDFCDTT20100524AAC	208.1
No	K25LJ-D	D25	LD	LIC	TRES PIEDRAS, NM	BLDTT20130613AAG	168.7
No	K25JT-D	D25	LD	LIC	BLANDING/MONTICELLO, UT	BLDTT20091222AMI	154.6
No	K26EP	N26-	TX	LIC	DULCE/LUMBERTON, NM	BLTT19970220JM	85.4
No	K28ER	N28+	TX	LIC	DULCE & LUMBERTON, NM	BLTT19970421JC	85.4
No	K31CT	N31	TX	LIC	CORTEZ, CO	BLTTL20050802ACX	27.4

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

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Record parameters as studied:

Channel: D24
Mask: Stringent
Latitude: 37 20 22.50 N (NAD83)
Longitude: 107 49 28.30 W
Height AMSL: 2753.0 m
HAAT: 0.0 m
Peak ERP: 0.800 kW
Antenna: Omnidirectional
Elev Pattn: Generic
Elec Tilt: 1.75

49.8 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.800 kW	411.3 m	45.6 km
45.0	0.800	-220.8	17.1
90.0	0.800	298.6	41.0
135.0	0.800	511.6	48.8
180.0	0.800	578.7	50.2
225.0	0.800	660.3	51.6
270.0	0.800	394.3	45.1
315.0	0.800	-18.0	17.1

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 327 m

Distance to Canadian border: 1296.0 km

Distance to Mexican border: 617.5 km

Conditions at FCC monitoring station: Douglas AZ
Bearing: 195.0 degrees Distance: 670.3 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 35.0 degrees Distance: 380.8 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 K45DH-C24-08k-2753m-T ----

Proposal receives 4.17% interference from scenario 1
No IX check failures found.

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