

ENGINEERING STATEMENT
IN SUPPORT OF
MINOR MODIFICATION OF A LICENSED DIGITAL TRANSLATOR FACILITY
K12OC-D
RED RIVER, NM

Background

Hearst is the licensee of K12OC-D (CDBS File No. BLDTV-20111019ACR, Facility ID. 13441) near Red River, NM. In the May of 2022, the tower supporting the K12OC-D antenna collapsed. K12OC-D has been operating, under STA (LMS File No. 0000203830), on a temporary tower erected approximately 10 ft from the location of the licensed tower site. A new, permanent tower has now been erected at the site and Hearst is seeking to modify the K12OC-D license for the new tower location.

Proposed Parameters

Hearst is proposing the following parameters for the K12OC-D operation:

Coordinates:	36° 41' 02.0" N (NAD83) 105° 22' 24.8" W
ERP:	0.3 kW
RCAMSL:	3031.5m
RCAGL:	10.0m
Antenna:	2xHDCA-10/URM/HV
Mask:	Simple

The overall height of the tower is 11.0m AGL and it passes the TOWAIR program. Therefore, the tower does not require an ASR, nor notification to the FAA.

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) with the default parameters. 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 is calculated to be 0.025057 mW/cm² at 2m AGL, which is much less than the maximum permissible exposure (MPE) for public areas (0.2 mW/cm²) at Ch. 12.

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.

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.
September 5, 2023

Attached:
TVStudy Interference Check Report
Antenna Azimuth Plot and Tabulation

TVStudy TV Interference Check Report for K12OC-D on Ch. 12

Study created: 2023.09.05 21:35:33

Study build station data: LMS TV 2023-09-05

Proposal: K12OC-D D12 LD LIC RED RIVER, NM
File number: K12OC_NewSite_HDCA_03kW_090523
Facility ID: 13441
Station data: User record
Record ID: 25
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	K12QO-D	D12	LD	LIC	ASPEN, CO	BLDTV20121119AGY	310.2 km
No	K12AK-D	D12	LD	LIC	CRESTED BUTTE, CO	BLDTV20100301AAE	283.8
No	K12XK-D	D12	LD	LIC	DENVER, CO	BLANK0000131988	324.4
No	K12QH-D	D12	LD	LIC	DOLORES, CO	BLDTV20110329ACZ	292.6
No	KKCO	D12	DT	LIC	GRAND JUNCTION, CO	BLANK0000029050	397.1
No	KKCO	D12	DT	CP	GRAND JUNCTION, CO	BLANK0000036039	397.1
No	K12LX-D	D12	LD	LIC	POWDERHORN, CO	BLDTV20111118CPI	237.1
No	K12QM-D	D12	LD	LIC	THOMASVILLE, CO	BLDTV20100709AHX	318.1
No	K12AL-D	D12	LD	LIC	WAUNITA HOT SPRINGS, CO	BLDTV20101216ACR	230.4
No	KVIH-TV	D12	DT	LIC	CLOVIS, NM	BLANK0000211126	335.6
No	KOBF	D12	DT	LIC	FARMINGTON, NM	BLCDT20090224AAZ	253.8
No	K12OG-D	D12	LD	LIC	TAOS, NM	BLDTV20110509ADP	35.3
No	KRQE	D13	DT	LIC	ALBUQUERQUE, NM	BLANK0000203847	190.2

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D12
Mask: Simple
Latitude: 36 41 2.03 N (NAD83)
Longitude: 105 22 24.82 W
Height AMSL: 3031.8 m
HAAT: 0.0 m
Peak ERP: 0.300 kW
Antenna: 2xHDCA-10/URM/HV 0.0 deg
Elev Pattn: Generic

48.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.011 kW	-141.6 m	7.6 km
45.0	0.011	31.0	7.8
90.0	0.012	120.4	15.3
135.0	0.006	305.9	21.1
180.0	0.237	-264.0	16.5
225.0	0.102	-179.4	13.5
270.0	0.285	176.4	37.8
315.0	0.029	-67.1	9.9

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: -2 m

Distance to Canadian border: 1368.9 km

Distance to Mexican border: 554.9 km

Conditions at FCC monitoring station: Douglas AZ
Bearing: 215.6 degrees Distance: 697.8 km

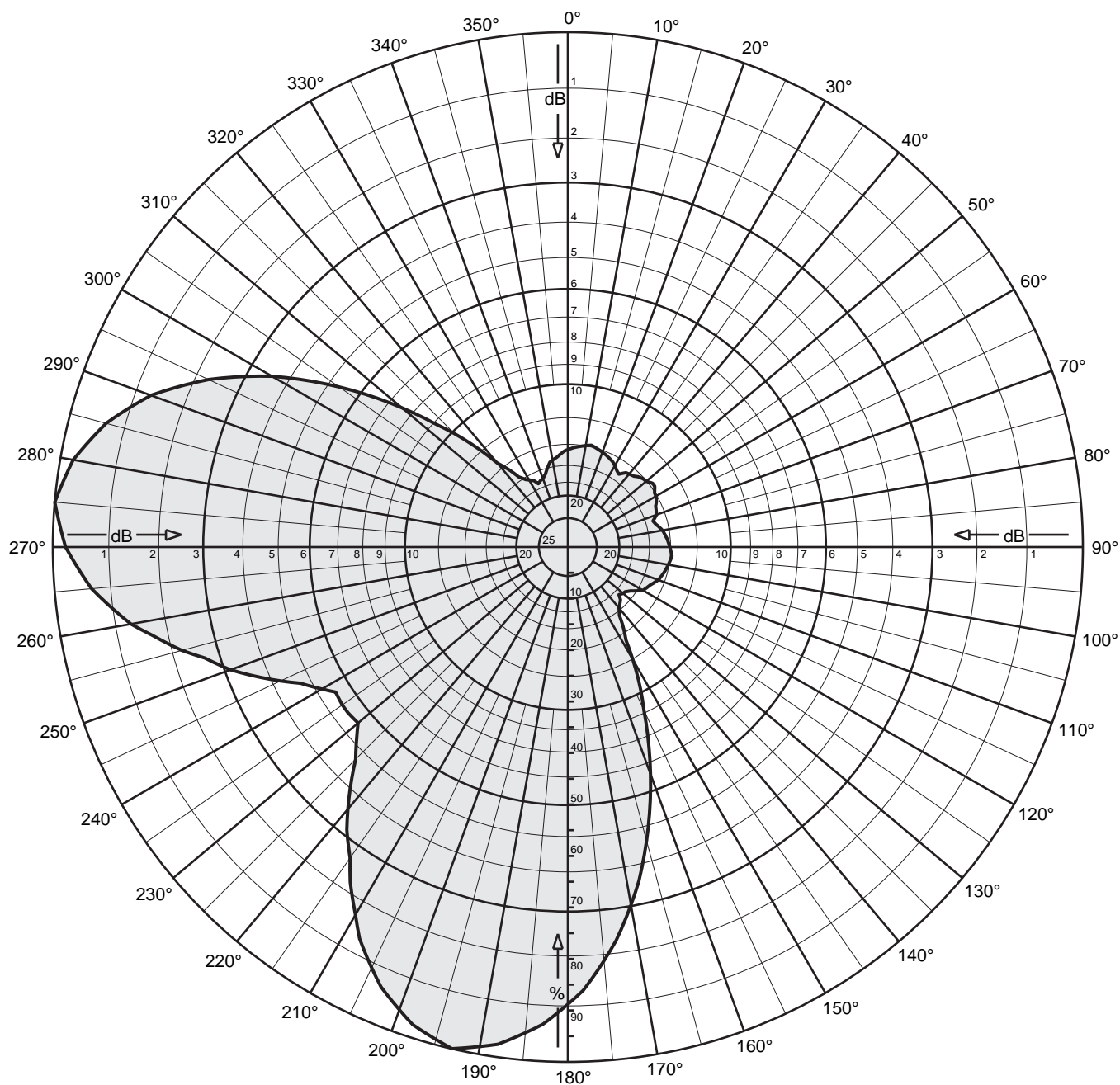
Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 1.5 degrees Distance: 381.8 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%

No IX check failures found.



2xHDCA-10/URM/HV Array ch 12

One antenna skewed 193° w/ 50% power

One antenna skewed 275° w/ 50% power

Vertically stacked @ .67 wl CTC (38 in)

Max gain: 6.5 dBd, power-x: 4.47

Horizontal Polarizaation

Horizontal Plane Pattern

SCALA

A Kathrein Broadcast Brand

Kathrein/Scala 2xHDCA/10/URM/HV - Ch. 12

TABULATED DATA FOR AZIMUTH PATTERN

ANGLE	FIELD	ANGLE	FIELD	ANGLE	FIELD	ANGLE	FIELD	ANGLE	FIELD	ANGLE	FIELD	ANGLE	FIELD
0	0.189	52	0.203	104	0.194	156	0.373	208	0.861	260	0.861	312	0.373
1	0.191	53	0.206	105	0.193	157	0.397	209	0.843	261	0.875	313	0.350
2	0.192	54	0.206	106	0.192	158	0.421	210	0.825	262	0.888	314	0.331
3	0.193	55	0.206	107	0.191	159	0.445	211	0.808	263	0.901	315	0.312
4	0.194	56	0.203	108	0.189	160	0.469	212	0.792	264	0.915	316	0.292
5	0.195	57	0.201	109	0.188	161	0.494	213	0.776	265	0.928	317	0.272
6	0.196	58	0.199	110	0.187	162	0.518	214	0.756	266	0.938	318	0.252
7	0.197	59	0.198	111	0.185	163	0.542	215	0.737	267	0.947	319	0.233
8	0.198	60	0.198	112	0.182	164	0.566	216	0.724	268	0.956	320	0.213
9	0.199	61	0.196	113	0.180	165	0.591	217	0.710	269	0.966	321	0.204
10	0.200	62	0.195	114	0.178	166	0.615	218	0.697	270	0.975	322	0.195
11	0.201	63	0.193	115	0.176	167	0.639	219	0.681	271	0.980	323	0.186
12	0.202	64	0.191	116	0.174	168	0.663	220	0.664	272	0.985	324	0.176
13	0.203	65	0.188	117	0.173	169	0.685	221	0.648	273	0.990	325	0.166
14	0.202	66	0.187	118	0.171	170	0.706	222	0.632	274	0.995	326	0.162
15	0.201	67	0.186	119	0.170	171	0.727	223	0.615	275	1.000	327	0.158
16	0.200	68	0.185	120	0.168	172	0.749	224	0.599	276	0.995	328	0.154
17	0.199	69	0.184	121	0.164	173	0.770	225	0.583	277	0.990	329	0.152
18	0.198	70	0.183	122	0.160	174	0.788	226	0.572	278	0.985	330	0.150
19	0.197	71	0.180	123	0.156	175	0.806	227	0.562	279	0.980	331	0.149
20	0.196	72	0.176	124	0.152	176	0.825	228	0.551	280	0.975	332	0.147
21	0.195	73	0.173	125	0.149	177	0.843	229	0.542	281	0.966	333	0.145
22	0.194	74	0.174	126	0.146	178	0.861	230	0.532	282	0.956	334	0.140
23	0.193	75	0.176	127	0.144	179	0.875	231	0.533	283	0.947	335	0.136
24	0.192	76	0.178	128	0.141	180	0.888	232	0.534	284	0.938	336	0.137
25	0.191	77	0.180	129	0.141	181	0.901	233	0.535	285	0.928	337	0.139
26	0.189	78	0.182	130	0.140	182	0.915	234	0.535	286	0.915	338	0.140
27	0.188	79	0.185	131	0.139	183	0.928	235	0.535	287	0.901	339	0.141
28	0.187	80	0.187	132	0.137	184	0.938	236	0.534	288	0.888	340	0.141
29	0.185	81	0.188	133	0.136	185	0.947	237	0.533	289	0.875	341	0.144
30	0.182	82	0.189	134	0.140	186	0.956	238	0.532	290	0.861	342	0.146
31	0.180	83	0.191	135	0.145	187	0.966	239	0.542	291	0.843	343	0.149
32	0.178	84	0.192	136	0.147	188	0.975	240	0.551	292	0.825	344	0.152
33	0.176	85	0.193	137	0.149	189	0.980	241	0.562	293	0.806	345	0.156
34	0.174	86	0.194	138	0.150	190	0.985	242	0.572	294	0.788	346	0.160
35	0.173	87	0.195	139	0.152	191	0.990	243	0.583	295	0.770	347	0.164
36	0.176	88	0.196	140	0.154	192	0.995	244	0.599	296	0.749	348	0.168
37	0.180	89	0.197	141	0.158	193	1.000	245	0.615	297	0.727	349	0.170
38	0.183	90	0.198	142	0.162	194	0.995	246	0.632	298	0.706	350	0.171
39	0.184	91	0.199	143	0.166	195	0.990	247	0.648	299	0.685	351	0.173
40	0.185	92	0.200	144	0.176	196	0.985	248	0.664	300	0.663	352	0.174
41	0.186	93	0.201	145	0.186	197	0.980	249	0.681	301	0.639	353	0.176
42	0.187	94	0.202	146	0.195	198	0.975	250	0.697	302	0.615	354	0.178
43	0.188	95	0.203	147	0.204	199	0.966	251	0.710	303	0.591	355	0.180
44	0.191	96	0.202	148	0.213	200	0.956	252	0.724	304	0.566	356	0.182
45	0.193	97	0.201	149	0.233	201	0.947	253	0.737	305	0.542	357	0.185
46	0.195	98	0.200	150	0.252	202	0.938	254	0.756	306	0.518	358	0.187
47	0.196	99	0.199	151	0.272	203	0.928	255	0.776	307	0.494	359	0.188
48	0.198	100	0.198	152	0.292	204	0.915	256	0.792	308	0.469		
49	0.198	101	0.197	153	0.312	205	0.901	257	0.808	309	0.445		
50	0.199	102	0.196	154	0.331	206	0.888	258	0.825	310	0.421		
51	0.201	103	0.195	155	0.350	207	0.875	259	0.843	311	0.397		