



**STATEMENT OF JOHN E. HIDLE, P.E.
IN SUPPORT OF AN APPLICATION FOR
A MINOR MODIFICATION OF A
LOW POWER TV CONSTRUCTION PERMIT
FILE # 0000072218
KCWF-LD - LAS CRUCES, NEW MEXICO
DTV - CH. 14 - 1 kW - 26 m AGL**

Prepared for: KDBC LICENSEE, LLC

I am a Consulting Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission. I am a Licensed Professional Engineer in the Commonwealth of Virginia, No. 7418, and in New York State, No. 63418.

GENERAL

This office has been authorized by KDBC LICENSEE, LLC, licensee of KCWF-LD, facility ID number 33767, licensed to Las Cruces, New Mexico, to prepare this statement, FCC Form 2100, Schedule A, its technical sections, and the associated exhibits in support of an application for a minor modification of its construction permit, File # 0000072218, that authorizes KCWF-LD continue broadcasting on channel 14. KCWF-LD herein requests authorization to substitute a different directional antenna, an elliptically polarized Dielectric model DLP-8M/VP, for its authorized directional antenna, a horizontally polarized SCA model 4DR-8S. The horizontal azimuth patterns of the two antennas differ to a significant extent, therefore the instant modification application provides the necessary technical data to demonstrate that the substitute elliptically polarized antenna will meet all requirements for authorization.

DIRECTIONAL ANTENNA

The applicant will install a new Dielectric model DLP-8M/VP elliptically polarized directional transmitting antenna with its center of radiation located at a height above ground of 26 meters. The antenna manufacturer's horizontal plane azimuth radiation pattern for the horizontally polarized signal is shown and tabulated in exhibit 2. The manufacturer's horizontal azimuth pattern for the vertically polarized signal is shown and tabulated in exhibit 3. The manufacturer's vertical plane elevation radiation pattern, illustrating the antenna's radiation characteristics above and below the horizontal plane is shown and tabulated in Exhibit 4.

PREDICTED COVERAGE CONTOURS

The predicted coverage contours were calculated in accordance with the method described in Section 73.625(b) of the Rules, utilizing the appropriate F(50,90) propagation curves (47 CFR Section 73.699, Figure 9), proposed Effective Radiated Power, and antenna height above average terrain as determined for each profile radial. The average terrain on the eight cardinal radials from 3 kilometers to 16 kilometers from the site, was determined using the NED Three Second US Terrain Database as permitted in the FCC Rules. The antenna site elevation and coordinates were determined from FCC antenna registration data. Exhibit 1 shows the predicted protected (51 dBu) contour which completely encompasses the principal community of license, Las Cruces, New Mexico.

ALLOCATION CONSIDERATIONS

A study was performed, using the FCC's software, *tvstudy*, v. 2.2.5, to determine if the instant application for modification of construction permit is predicted to cause new prohibited interference to post reassignment DTV stations, construction permits, DTV allotments or Class A DTV stations. The study results, shown in Appendix B, indicate that the instant modification to its construction permit is predicted to cause no new interference exceeding 0.5% to the populations served by any other post reassignment DTV station, construction permit, allotment or Class A DTV stations.

International DTV Considerations

The KCWF-LD site is located 69.0 kilometers from the nearest point on the US/Mexican border, within the Mexican coordination zone. The results of the *tvstudy* interference analysis include all Mexican television facilities and show no impermissible interference to any Mexican facility.

BLANKETING AND INTERMODULATION INTERFERENCE

Other broadcast and non-broadcast facilities are either co-located with, or located within 10 km of the proposed KCWF-LD site. The applicant does recognize its responsibility to remedy complaints of interference that might result from this proposal in accordance with applicable Rules.

RADIO FREQUENCY IMPACT, SAFETY & STATEMENT OF COMPLIANCE

The licensee of KCWF-LD is committed to the protection of station personnel and/or tower contractors working in the vicinity of the KCWF-LD antenna and will reduce power or cease operation, when necessary, to ensure protection to personnel.

As shown in Appendix A the KCWF-LD channel 14 application for modification of its construction permit, as proposed herein, will operate with a maximum ERP of 1 kW from an elliptically polarized directional transmitting antenna with a centerline height of 26 meters above ground level (AGL). Considering the elevation pattern submitted elsewhere in this submission, the vertical plane relative field factor is less than 0.227 at all depression angles greater than 6 degrees. The proposed KCWF-LD channel 14 facility is predicted to produce a worst-case power density at two meters above ground level, at 11.2 meters from the tower base, of $4.780 \mu\text{W}/\text{cm}^2$, which is 1.52% of the FCC guideline value of $315.33 \mu\text{W}/\text{cm}^2$ for an "uncontrolled" environment, and 0.304% of the FCC's guideline value for "controlled" environments. Therefore, pursuant to Section 1.1307(b)(3) of the FCC Rules, because the proposed facility would not exceed 5% of the uncontrolled and controlled exposure limits, the proposal's power density contribution is considered insignificant.

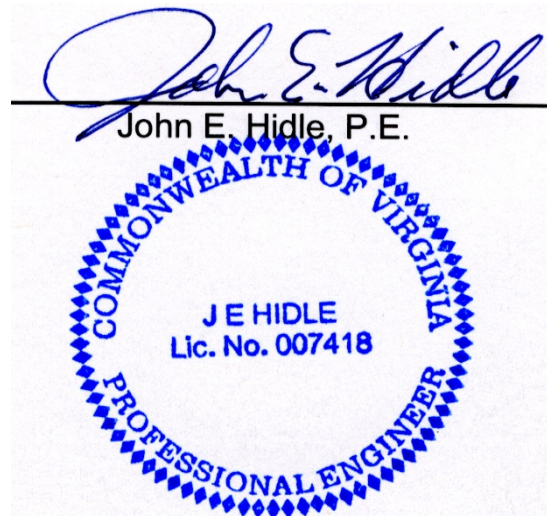
Further, the Applicant will continue to cooperate/coordinate with other site users and reduce power and/or cease operation during times of service or maintenance of the transmission systems as necessary to avoid potentially harmful exposure to personnel. In light of the above, the proposed facility should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Commission's Rules.

STATEMENT OF JOHN E. HIDLE, P.E.
KCWF-LD - Las Cruces, New Mexico
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SUMMARY

It is submitted that the instant application for a minor modification of its channel 14 construction permit, file # 0000072218, to substitute an elliptically polarized directional antenna for its authorized horizontally polarized directional antenna, as described herein, does comply with the Rules, Regulations and relevant Policies of the Federal Communications Commission. This statement, FCC Form 2100, its technical sections, and the attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct to the best of my knowledge and belief.

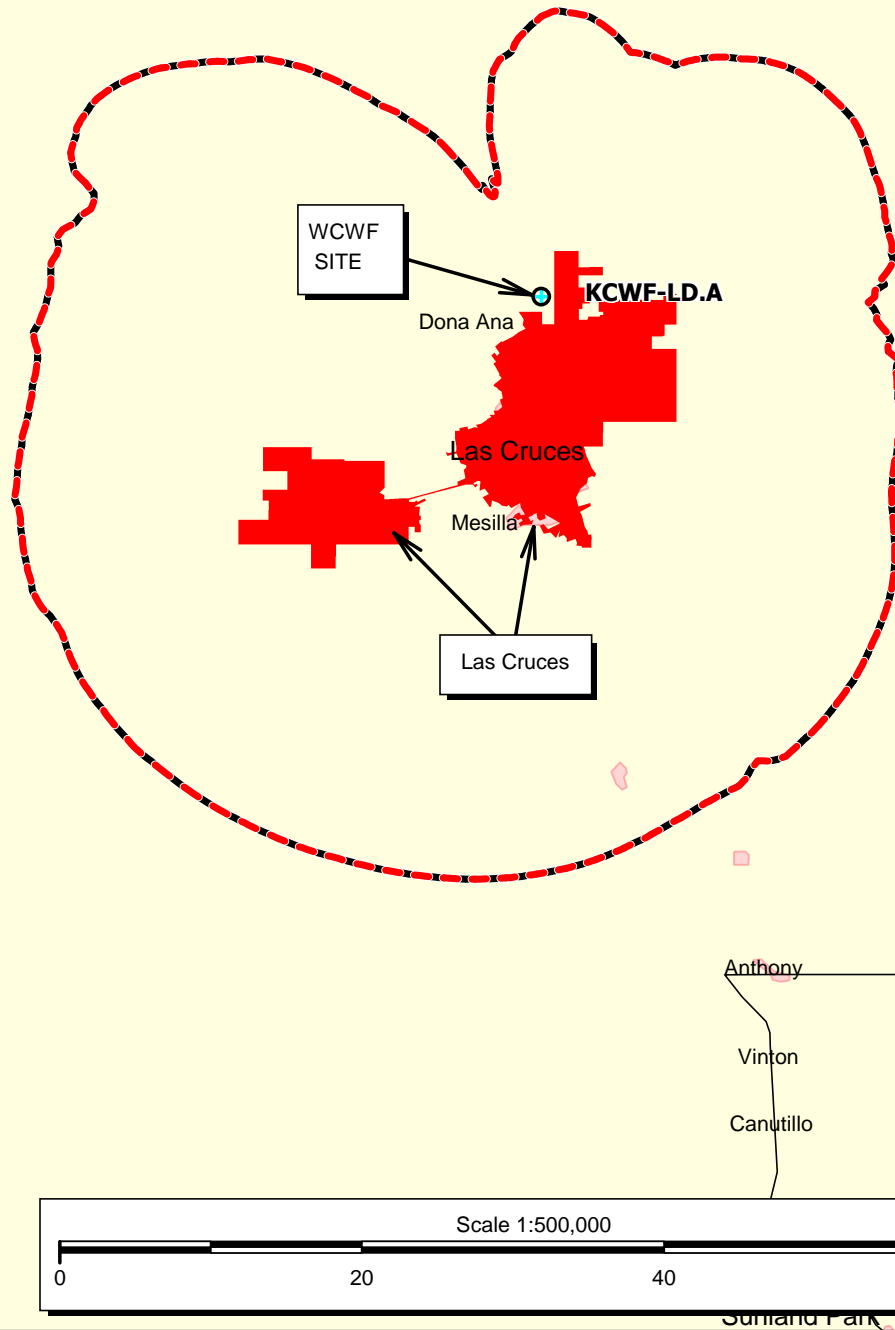
DATED: October 28, 2020



Hatch

■ KCWF-LD.A (14+)

EXHIBIT 1



PREDICTED COVERAGE CONTOURS

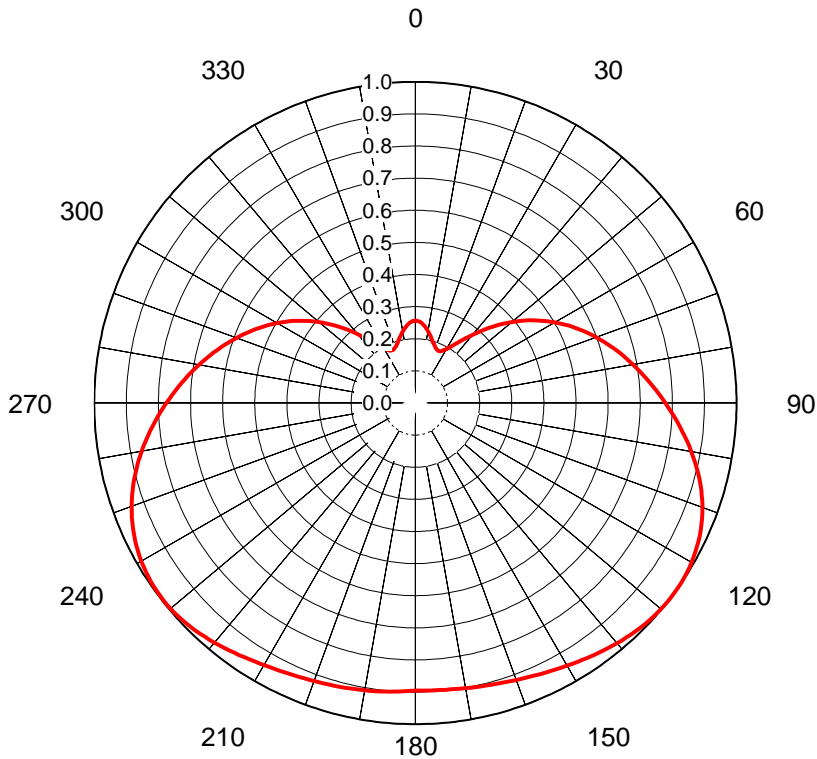
KCWF-LD AP - Las Cruces, NM
DTV Channel 14 - 1 kW ERP - 172 M HAAT
OCT, 2020

Predicted Noise Limited 51.0 dBu
F(50,90) Coverage Contour



Predicted Principal Community 51.0 dBu
F(50,90) Coverage Contour

AZIMUTH PATTERN Horizontal Polarization



Proposal No.

Date **21-Oct-20**

Call Letters **KCWF-LD**

Channel **14**

Frequency **473 MHz**

Antenna Type **DLP-8M/VP**

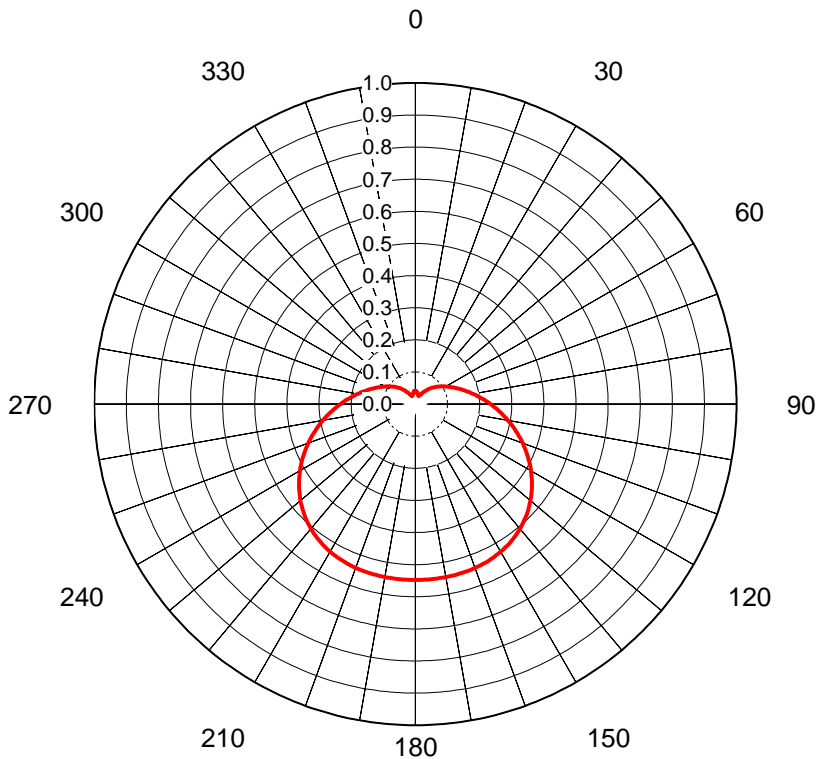
Gain **1.88 (2.73dB)**

Calculated

Pattern Number **TLP-M-14 Hpol**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.257	36	0.238	72	0.617	108	0.938	144	0.964	180	0.895	216	0.961	252	0.927	288	0.611
1	0.256	37	0.248	73	0.626	109	0.945	145	0.960	181	0.897	217	0.964	253	0.920	289	0.602
2	0.255	38	0.257	74	0.635	110	0.951	146	0.957	182	0.898	218	0.967	254	0.913	290	0.593
3	0.253	39	0.267	75	0.644	111	0.957	147	0.954	183	0.900	219	0.971	255	0.906	291	0.583
4	0.251	40	0.278	76	0.653	112	0.963	148	0.951	184	0.901	220	0.974	256	0.898	292	0.574
5	0.248	41	0.289	77	0.662	113	0.968	149	0.947	185	0.902	221	0.977	257	0.890	293	0.565
6	0.245	42	0.300	78	0.671	114	0.972	150	0.944	186	0.904	222	0.980	258	0.882	294	0.555
7	0.241	43	0.311	79	0.680	115	0.977	151	0.941	187	0.905	223	0.983	259	0.874	295	0.546
8	0.236	44	0.322	80	0.688	116	0.981	152	0.938	188	0.906	224	0.985	260	0.865	296	0.536
9	0.232	45	0.334	81	0.697	117	0.984	153	0.935	189	0.907	225	0.988	261	0.857	297	0.527
10	0.227	46	0.346	82	0.706	118	0.987	154	0.933	190	0.908	226	0.990	262	0.848	298	0.517
11	0.222	47	0.357	83	0.715	119	0.990	155	0.930	191	0.910	227	0.992	263	0.839	299	0.507
12	0.217	48	0.369	84	0.724	120	0.993	156	0.927	192	0.911	228	0.993	264	0.830	300	0.497
13	0.212	49	0.381	85	0.733	121	0.995	157	0.925	193	0.912	229	0.994	265	0.821	301	0.487
14	0.207	50	0.393	86	0.742	122	0.996	158	0.922	194	0.913	230	0.995	266	0.812	302	0.477
15	0.202	51	0.404	87	0.751	123	0.998	159	0.920	195	0.914	231	0.996	267	0.803	303	0.467
16	0.198	52	0.415	88	0.760	124	0.999	160	0.918	196	0.916	232	0.996	268	0.794	304	0.457
17	0.194	53	0.427	89	0.769	125	1.000	161	0.916	197	0.917	233	0.996	269	0.784	305	0.446
18	0.190	54	0.438	90	0.778	126	1.000	162	0.914	198	0.918	234	0.996	270	0.775	306	0.436
19	0.186	55	0.449	91	0.788	127	1.000	163	0.912	199	0.920	235	0.995	271	0.766	307	0.425
20	0.183	56	0.460	92	0.797	128	1.000	164	0.910	200	0.921	236	0.993	272	0.757	308	0.414
21	0.181	57	0.470	93	0.807	129	0.999	165	0.908	201	0.923	237	0.992	273	0.748	309	0.403
22	0.179	58	0.481	94	0.816	130	0.998	166	0.907	202	0.925	238	0.990	274	0.739	310	0.392
23	0.178	59	0.491	95	0.826	131	0.997	167	0.905	203	0.926	239	0.988	275	0.730	311	0.381
24	0.178	60	0.502	96	0.835	132	0.996	168	0.904	204	0.928	240	0.985	276	0.720	312	0.370
25	0.178	61	0.512	97	0.845	133	0.994	169	0.903	205	0.930	241	0.982	277	0.711	313	0.358
26	0.180	62	0.522	98	0.854	134	0.992	170	0.901	206	0.932	242	0.979	278	0.702	314	0.347
27	0.182	63	0.532	99	0.863	135	0.990	171	0.900	207	0.935	243	0.975	279	0.693	315	0.335
28	0.185	64	0.542	100	0.873	136	0.987	172	0.899	208	0.937	244	0.971	280	0.684	316	0.324
29	0.189	65	0.552	101	0.882	137	0.985	173	0.899	209	0.940	245	0.967	281	0.675	317	0.313
30	0.194	66	0.561	102	0.890	138	0.982	174	0.898	210	0.942	246	0.962	282	0.666	318	0.302
31	0.200	67	0.571	103	0.899	139	0.979	175	0.897	211	0.945	247	0.957	283	0.657	319	0.291
32	0.206	68	0.580	104	0.907	140	0.976	176	0.897	212	0.948	248	0.952	284	0.648	320	0.280
33	0.214	69	0.590	105	0.916	141	0.973	177	0.896	213	0.951	249	0.946	285	0.639	321	0.270
34	0.221	70	0.599	106	0.923	142	0.970	178	0.896	214	0.954	250	0.940	286	0.630	322	0.260
35	0.229	71	0.608	107	0.931	143	0.967	179	0.896	215	0.958	251	0.934	287	0.620	323	0.250

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AZIMUTH PATTERN Vertical Polarization

Proposal No.
 Date **21-Oct-20**
 Call Letters **KCWF-LD**
 Channel **14**
 Frequency **473 MHz**
 Antenna Type **DLP-8M/VP**
 Gain **2.67 (4.27dB)**
 Calculated

 Pattern Number **TLP-M-14 Vpol**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.042	36	0.049	72	0.149	108	0.343	144	0.518	180	0.548	216	0.518	252	0.342	288	0.148	324	0.049
1	0.041	37	0.051	73	0.153	109	0.349	145	0.521	181	0.548	217	0.515	253	0.336	289	0.145	325	0.046
2	0.041	38	0.054	74	0.157	110	0.355	146	0.523	182	0.548	218	0.512	254	0.330	290	0.141	326	0.044
3	0.041	39	0.056	75	0.161	111	0.362	147	0.525	183	0.548	219	0.509	255	0.323	291	0.137	327	0.042
4	0.041	40	0.058	76	0.165	112	0.368	148	0.527	184	0.548	220	0.506	256	0.317	292	0.134	328	0.040
5	0.040	41	0.061	77	0.169	113	0.374	149	0.529	185	0.548	221	0.503	257	0.311	293	0.131	329	0.038
6	0.039	42	0.063	78	0.174	114	0.380	150	0.531	186	0.547	222	0.499	258	0.305	294	0.127	330	0.036
7	0.039	43	0.066	79	0.178	115	0.386	151	0.533	187	0.547	223	0.496	259	0.298	295	0.124	331	0.034
8	0.038	44	0.068	80	0.183	116	0.392	152	0.534	188	0.547	224	0.492	260	0.292	296	0.121	332	0.032
9	0.037	45	0.071	81	0.187	117	0.398	153	0.536	189	0.547	225	0.488	261	0.286	297	0.118	333	0.031
10	0.036	46	0.073	82	0.192	118	0.404	154	0.537	190	0.547	226	0.484	262	0.280	298	0.115	334	0.030
11	0.035	47	0.076	83	0.197	119	0.410	155	0.538	191	0.547	227	0.480	263	0.274	299	0.112	335	0.028
12	0.034	48	0.078	84	0.202	120	0.416	156	0.540	192	0.546	228	0.476	264	0.268	300	0.109	336	0.028
13	0.033	49	0.081	85	0.207	121	0.421	157	0.541	193	0.546	229	0.472	265	0.262	301	0.106	337	0.027
14	0.032	50	0.083	86	0.212	122	0.427	158	0.542	194	0.546	230	0.467	266	0.256	302	0.104	338	0.027
15	0.031	51	0.086	87	0.217	123	0.432	159	0.542	195	0.545	231	0.462	267	0.250	303	0.101	339	0.027
16	0.030	52	0.088	88	0.223	124	0.438	160	0.543	196	0.545	232	0.458	268	0.245	304	0.098	340	0.027
17	0.029	53	0.091	89	0.228	125	0.443	161	0.544	197	0.545	233	0.453	269	0.239	305	0.096	341	0.028
18	0.028	54	0.093	90	0.234	126	0.448	162	0.544	198	0.544	234	0.448	270	0.233	306	0.093	342	0.028
19	0.028	55	0.096	91	0.239	127	0.453	163	0.545	199	0.543	235	0.442	271	0.228	307	0.091	343	0.029
20	0.027	56	0.098	92	0.245	128	0.458	164	0.545	200	0.543	236	0.437	272	0.222	308	0.088	344	0.030
21	0.027	57	0.101	93	0.251	129	0.463	165	0.546	201	0.542	237	0.432	273	0.217	309	0.085	345	0.031
22	0.027	58	0.104	94	0.257	130	0.468	166	0.546	202	0.541	238	0.426	274	0.212	310	0.083	346	0.032
23	0.027	59	0.107	95	0.263	131	0.472	167	0.546	203	0.540	239	0.421	275	0.207	311	0.080	347	0.033
24	0.028	60	0.109	96	0.268	132	0.477	168	0.547	204	0.539	240	0.415	276	0.202	312	0.078	348	0.034
25	0.029	61	0.112	97	0.274	133	0.481	169	0.547	205	0.538	241	0.409	277	0.197	313	0.076	349	0.035
26	0.030	62	0.115	98	0.281	134	0.485	170	0.547	206	0.537	242	0.403	278	0.192	314	0.073	350	0.036
27	0.031	63	0.118	99	0.287	135	0.489	171	0.547	207	0.535	243	0.398	279	0.187	315	0.071	351	0.037
28	0.032	64	0.121	100	0.293	136	0.493	172	0.547	208	0.534	244	0.392	280	0.182	316	0.068	352	0.038
29	0.034	65	0.124	101	0.299	137	0.497	173	0.547	209	0.532	245	0.386	281	0.178	317	0.066	353	0.039
30	0.036	66	0.128	102	0.305	138	0.500	174	0.548	210	0.531	246	0.379	282	0.173	318	0.063	354	0.039
31	0.038	67	0.131	103	0.311	139	0.503	175	0.548	211	0.529	247	0.373	283	0.169	319	0.061	355	0.040
32	0.040	68	0.134	104	0.318	140	0.507	176	0.548	212	0.527	248	0.367	284	0.165	320	0.058	356	0.041
33	0.042	69	0.138	105	0.324	141	0.510	177	0.548	213	0.525	249	0.361	285	0.160	321	0.056	357	0.041
34	0.044	70	0.141	106	0.330	142	0.513	178	0.548	214	0.523	250	0.355	286	0.156	322	0.053	358	0.041
35	0.046	71	0.145	107	0.337	143	0.516	179	0.548	215	0.520	251	0.348	287	0.152	323	0.051	359	0.041

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ELEVATION PATTERN

Proposal No.

Date **21-Oct-20**

Call Letters **KCWF-LD**

Channel **14**

Frequency **473 MHz**

Antenna Type **DLP-8M/VP**

RMS Directivity at Main Lobe

8.1 (9.10 dB)

Beam Tilt

1.00 deg

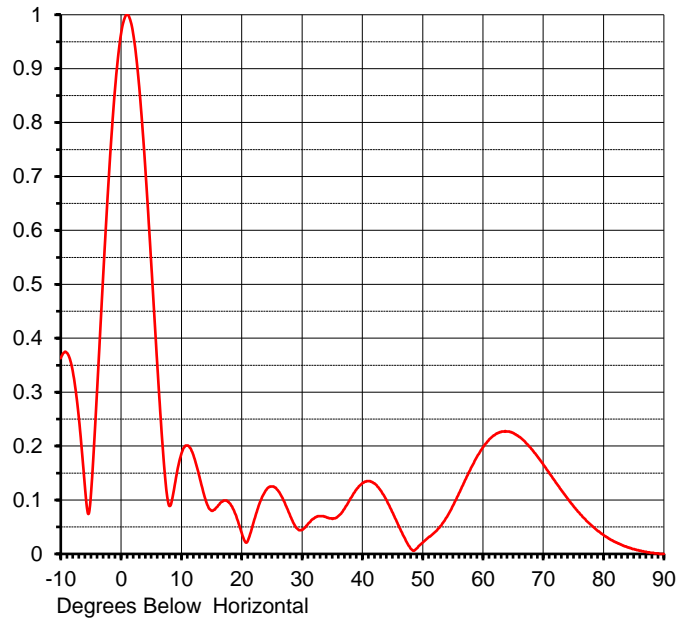
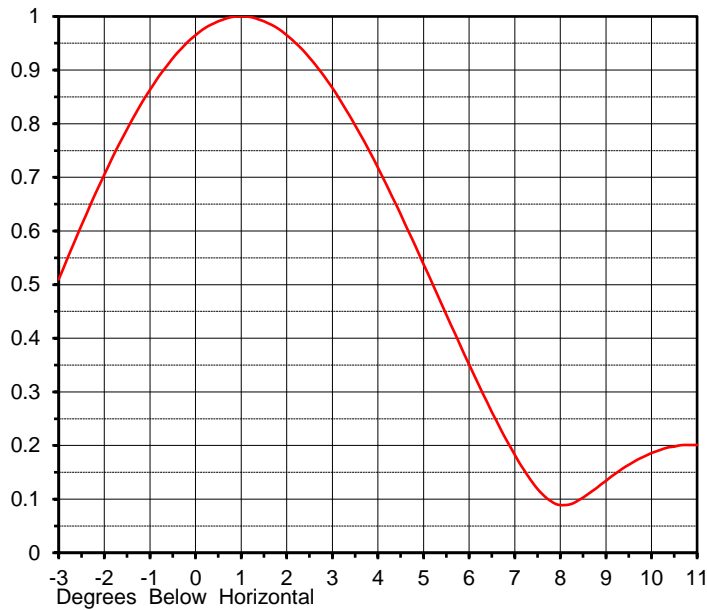
RMS Directivity at Horizontal

7.6 (8.81 dB)

Pattern Number

08L081100-14

Calculated



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.363	10.0	0.186	30.0	0.045	50.0	0.021	70.0	0.166
-9.0	0.373	11.0	0.201	31.0	0.056	51.0	0.031	71.0	0.150
-8.0	0.338	12.0	0.183	32.0	0.066	52.0	0.040	72.0	0.134
-7.0	0.252	13.0	0.143	33.0	0.070	53.0	0.052	73.0	0.118
-6.0	0.125	14.0	0.101	34.0	0.068	54.0	0.068	74.0	0.103
-5.0	0.110	15.0	0.080	35.0	0.065	55.0	0.089	75.0	0.089
-4.0	0.299	16.0	0.088	36.0	0.070	56.0	0.112	76.0	0.076
-3.0	0.510	17.0	0.099	37.0	0.083	57.0	0.136	77.0	0.064
-2.0	0.705	18.0	0.094	38.0	0.102	58.0	0.159	78.0	0.053
-1.0	0.863	19.0	0.073	39.0	0.119	59.0	0.180	79.0	0.043
0.0	0.965	20.0	0.039	40.0	0.131	60.0	0.198	80.0	0.035
1.0	1.000	21.0	0.024	41.0	0.135	61.0	0.212	81.0	0.028
2.0	0.965	22.0	0.060	42.0	0.131	62.0	0.221	82.0	0.022
3.0	0.867	23.0	0.095	43.0	0.118	63.0	0.226	83.0	0.017
4.0	0.718	24.0	0.118	44.0	0.100	64.0	0.227	84.0	0.012
5.0	0.538	25.0	0.125	45.0	0.077	65.0	0.224	85.0	0.009
6.0	0.351	26.0	0.118	46.0	0.053	66.0	0.217	86.0	0.006
7.0	0.183	27.0	0.098	47.0	0.030	67.0	0.208	87.0	0.004
8.0	0.089	28.0	0.072	48.0	0.010	68.0	0.195	88.0	0.002
9.0	0.134	29.0	0.049	49.0	0.010	69.0	0.181	89.0	0.001
								90.0	0.000

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KCWF-LD
Channel 14 - Las Cruces, NM
ERP = 1000.00 WATTS

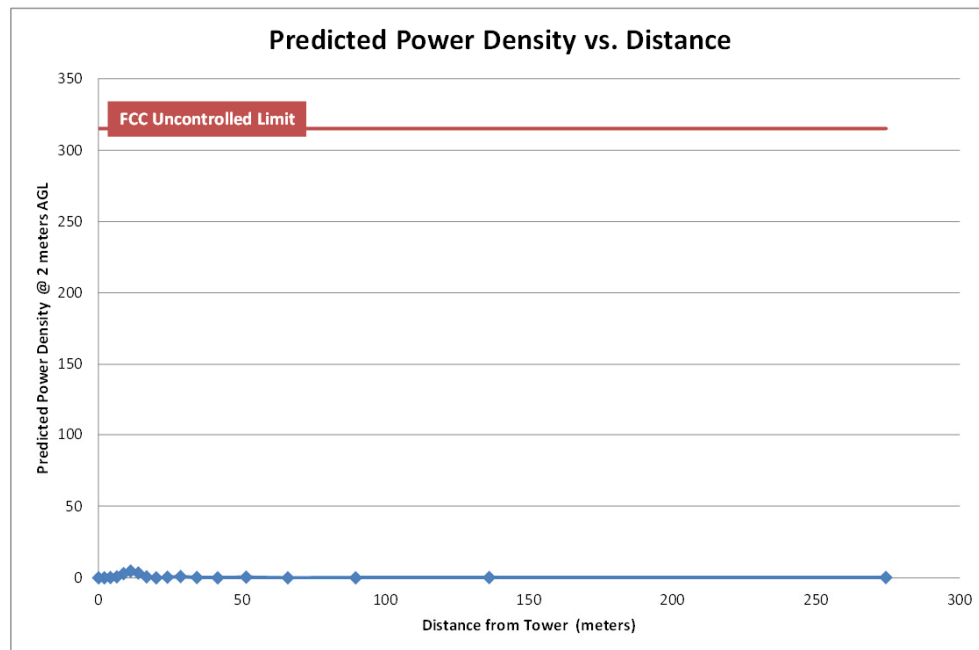
APPENDIX A

Maximum ERP 1 kW

Polarization ----- 2 Circular
 Antenna Height Above Ground - 26 meters 85.3 feet
 FCC Uncontrolled RFR Limit --- 315.33 $\mu\text{W}/\text{cm}^2$

Maximum Computed Power Density 4.780 $\mu\text{W}/\text{cm}^2$
 1.52% of limit

Angle Below Horizontal (degrees)	<Point X> Horiz Distance from tower to 2 m AGL (meters)	Slant Distance from antenna to Point X (meters)	Vertical Pattern (REL. FIELD)	KCWF-LD ERP (kW)	KCWF-LD Calculated Power Density $\mu\text{W}/\text{cm}^2$	Percent Limit	Limit Exceeded?
0			0.965	0.9312			
5	274.3	275.4	0.538	0.2894	0.255	0.08%	No
10	136.1	138.2	0.186	0.0346	0.121	0.04%	No
15	89.6	92.7	0.080	0.0064	0.050	0.02%	No
20	65.9	70.2	0.039	0.0015	0.021	0.01%	No
25	51.5	56.8	0.125	0.0156	0.324	0.10%	No
30	41.6	48.0	0.045	0.0020	0.059	0.02%	No
35	34.3	41.8	0.065	0.0042	0.161	0.05%	No
40	28.6	37.3	0.131	0.0172	0.822	0.26%	No
45	24.0	33.9	0.077	0.0059	0.344	0.11%	No
50	20.1	31.3	0.021	0.0004	0.030	0.01%	No
55	16.8	29.3	0.089	0.0079	0.616	0.20%	No
60	13.9	27.7	0.198	0.0392	3.410	1.08%	No
65	11.2	26.5	0.224	0.0502	4.780	1.52%	No
70	8.7	25.5	0.166	0.0276	2.822	0.89%	No
75	6.4	24.8	0.080	0.0064	0.693	0.22%	No
80	4.2	24.4	0.035	0.0012	0.138	0.04%	No
85	2.1	24.1	0.009	0.0001	0.009	0.00%	No
90	0.0	24.0	0.000	0.0000	0.000	0.00%	No





KCWF-LD - LAS CRUCES, NEW MEXICO

OCTOBER 2020

APPENDIX B

Longley-Rice Interference Analysis

tvstudy v2.2.5 (4uoc83)
 Database: localhost, Study: KCWF-LP 14 1KW 1495C TLP-M, Model: Longley-Rice
 Start: 2020.10.28 12:04:11

Study created: 2020.10.28 12:04:11

Study build station data: LMS TV 2020-10-28

Proposal: KCWF-LP D14+ LD CP LAS CRUCES, NM
 File number: KCWF-LP 14 1KW 1495C TLP-M
 Facility ID: 33767
 Station data: User record
 Record ID: 259
 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
 Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K14PE-D	D14	LD	CP	BOWIE, AZ	BNPDTL20100504AMN	256.4 km
No	KUDF-LP	D14	LD	LIC	TUCSON, AZ	BLDTL20131101AIX	371.1
No	K14QG-D	D14	LD	LIC	ALAMOGORDO, NM	BLANK0000001405	95.8
No	K14PK-D	D14	LD	CP	HOBBS, NM	BNPDTL20101012AFA	339.7
Yes	K14QE-D	D14	LD	CP	MAGDALENA, NM	BNPDTL20100513AEN	82.6
No	KAOE-LD	D14	LD	CP	SANTA FE, NM	BNPDTL20091014AAS	415.0
No	K14SR-D	D14	LD	CP	LAREDO, TX	BMJADTL20100524AIG	248.3
No	K15IG-D	D15	LD	LIC	DEMING, NM	BLDTT20140516AAJ	82.9
Yes	KFOX-TV	D15	DT	LIC	EL PASO, TX	BLCDT20051103AAE	70.3
No	XHALC	D14	DT	LIC	ALDAMA, CH	BLANKBPFS20151106EOQ	282.7
No	XHBNI	D14	DT	LIC	BACADEHUACHI, SO	BLANKBPFS20151113AIL	366.9
No	XHBCI	D14	DT	LIC	BACOACHI, SO	BLANKBPFS20151113AJC	362.1
No	XHBVE	D14	DT	LIC	BAVISPE, SO	BLANKBPFS20151113AJM	297.8
No	XHHCH	D14	DT	LIC	HUACHINERAS, SO	BLANKBPFS20151113ALW	321.3
No	XHNCO	D14	DT	LIC	NACORI CHICO, SO	BLANKBPFS20151116AIN	368.8
No	XHVHO	D14	DT	LIC	VILLA HIDALGO, SO	BLANKBPFS20151116APE	347.9

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D14+
 Mask: Stringent
 Latitude: 32 24 16.70 N (NAD83)
 Longitude: 106 45 39.90 W
 Height AMSL: 1494.8 m
 HAAT: 0.0 m
 Peak ERP: 1.00 kW

Appendix B - Interference Analysis **KCWF-LD - Las Cruces, New Mexico** **Channel 14 - 1 kW - Page 2**

Antenna: DIE TLP-M at 180 degs 0.0 deg
Elev Pattn: Generic

48.7 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.066 kW	143.1 m	21.2 km
45.0	0.113	154.4	24.7
90.0	0.605	69.6	25.2
135.0	0.976	132.2	34.3
180.0	0.801	267.7	40.9
225.0	0.969	285.0	42.7
270.0	0.601	191.2	35.3
315.0	0.113	144.7	24.0

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 173 m

Distance to Canadian border: 1844.6 km

**Proposal is within coordination distance of Mexican border
Distance to Mexican border: 69.0 km

Conditions at FCC monitoring station: Douglas AZ
Bearing: 250.6 degrees Distance: 290.7 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 8.5 degrees Distance: 867.9 km

No land mobile station failures found

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%

----- Interference to BNPDTL20100513AEN CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	K14QE-D	D14	LD	CP	MAGDALENA, NM	BNPDTL20100513AEN	
Undesireds:	KCWF-LP	D14+	LD	CP	LAS CRUCES, NM	KCWF-LP 14 1KW 1495C T	82.6 km
	Service area			Terrain-limited	IX-free, before	IX-free, after	Percent New IX
	1202.7	11,327	1039.0	11,041	1039.0	11,041	0.58 0.00
Undesired				Total IX	Unique IX, before	Unique IX, after	
KCWF-LP D14+ LD CP		6.0		0		6.0 0	

----- Interference to BLCDT20051103AAE LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KFOX-TV	D15	DT	LIC	EL PASO, TX	BLCDT20051103AAE	
Undesireds:	KCWF-LP	D14+	LD	CP	LAS CRUCES, NM	KCWF-LP 14 1KW 1495C T	70.3 km
	KTSM-TV	D16	DT	LIC	EL PASO, TX	BLANK0000001605	1.2
	Service area			Terrain-limited	IX-free, before	IX-free, after	Percent New IX
	27790.4	1,024,082	25568.0	1,018,687	25541.9	1,018,596	0.50 0.42
	13711.3	1,348,546	13103.2	1,348,524	12992.4	1,348,474	0.00 0.00 (in
Mexico)							
Undesired				Total IX	Unique IX, before	Unique IX, after	
KCWF-LP D14+ LD CP		127.5		4,247		126.5 4,247	

Appendix B - Interference Analysis
KCWF-LD - Las Cruces, New Mexico
Channel 14 - 1 kW - Page 3

KTSM-TV D16 DT LIC	26.1	91	26.1	91	25.1	91
KTSM-TV D16 DT LIC	110.8	50	110.8	50	110.8	50 (in Mexico)

Interference to proposal scenario 1

Desired:	Call KCWF-LP	Chan D14+	Svc LD	Status CP	City, State LAS CRUCES, NM	File Number KCWF-LP 14 1KW 1495C T	Distance
Undesireds:	K14QG-D	D14	LD	LIC	ALAMOGORDO, NM	BLANK0000001405	95.8 km
	KFOX-TV	D15	DT	LIC	EL PASO, TX	BLCDT20051103AAE	70.3

Service area	Terrain-limited	IX-free	Percent IX
3172.3 157,662	2717.1 156,545	2579.3 156,335	5.07 0.13

Undesired	Total IX	Unique IX	Prcnt Unique IX
K14QG-D D14 LD LIC	1.0 0	1.0 0	0.04 0.00
KFOX-TV D15 DT LIC	136.8 210	136.8 210	5.03 0.13



RADIO FREQUENCY IMPACT, SAFETY & STATEMENT OF COMPLIANCE

The licensee of KCWF-LD is committed to the protection of station personnel and/or tower contractors working in the vicinity of the KCWF-LD antenna and will reduce power or cease operation, when necessary, to ensure protection to personnel.

As shown in Appendix A the KCWF-LD channel 14 application for modification of its construction permit, as proposed herein, will operate with a maximum ERP of 1 kW from an elliptically polarized directional transmitting antenna with a centerline height of 26 meters above ground level (AGL). Considering the elevation pattern submitted elsewhere in this submission, the vertical plane relative field factor is less than 0.227 at all depression angles greater than 6 degrees. The proposed KCWF-LD channel 14 facility is predicted to produce a worst-case power density at two meters above ground level, at 11.2 meters from the tower base, of $4.780 \mu\text{W}/\text{cm}^2$, which is 1.52% of the FCC guideline value of $315.33 \mu\text{W}/\text{cm}^2$ for an "uncontrolled" environment, and 0.304% of the FCC's guideline value for "controlled" environments. Therefore, pursuant to Section 1.1307(b)(3) of the FCC Rules, because the proposed facility would not exceed 5% of the uncontrolled and controlled exposure limits, the proposal's power density contribution is considered insignificant.

Further, the Applicant will continue to cooperate/coordinate with other site users and reduce power and/or cease operation during times of service or maintenance of the transmission systems as necessary to avoid potentially harmful exposure to personnel. In light of the above, the proposed facility should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Commission's Rules.

KCWF-LD
Channel 14 - Las Cruces, NM
ERP = 1000.00 WATTS

APPENDIX A

Maximum ERP 1 kW

Polarization ----- 2 Circular
 Antenna Height Above Ground - 26 meters 85.3 feet
 FCC Uncontrolled RFR Limit --- 315.33 $\mu\text{W}/\text{cm}^2$

Maximum Computed Power Density 4.780 $\mu\text{W}/\text{cm}^2$
 1.52% of limit

Angle Below Horizontal (degrees)	<Point X> Horiz Distance from tower to 2 m AGL (meters)	Slant Distance from antenna to Point X (meters)	Vertical Pattern (REL. FIELD)	KCWF-LD ERP (kW)	KCWF-LD Calculated Power Density $\mu\text{W}/\text{cm}^2$	Percent Limit	Limit Exceeded?
0			0.965	0.9312			
5	274.3	275.4	0.538	0.2894	0.255	0.08%	No
10	136.1	138.2	0.186	0.0346	0.121	0.04%	No
15	89.6	92.7	0.080	0.0064	0.050	0.02%	No
20	65.9	70.2	0.039	0.0015	0.021	0.01%	No
25	51.5	56.8	0.125	0.0156	0.324	0.10%	No
30	41.6	48.0	0.045	0.0020	0.059	0.02%	No
35	34.3	41.8	0.065	0.0042	0.161	0.05%	No
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50	20.1	31.3	0.021	0.0004	0.030	0.01%	No
55	16.8	29.3	0.089	0.0079	0.616	0.20%	No
60	13.9	27.7	0.198	0.0392	3.410	1.08%	No
65	11.2	26.5	0.224	0.0502	4.780	1.52%	No
70	8.7	25.5	0.166	0.0276	2.822	0.89%	No
75	6.4	24.8	0.080	0.0064	0.693	0.22%	No
80	4.2	24.4	0.035	0.0012	0.138	0.04%	No
85	2.1	24.1	0.009	0.0001	0.009	0.00%	No
90	0.0	24.0	0.000	0.0000	0.000	0.00%	No

