

Displacement Application

LPTV or Translator Facility: KWYM-LP Facility ID 128717 Laramie, WY
Licensed Analog Ch. 14 File# BLTTL-20040826AAP
Authorized Digital Companion Ch. 17 File# 0000001722

Nature of Displacement: Digital Companion Construction Permit Ch. 17 is displaced
Interference caused to KPJR-TV Repack Ch. 17 Greeley CO
TVStudy Displacement summary in Table 1

Proposed Facility: Ch. 25 15 kW ERP directional (azimuth pattern in Figure 1)

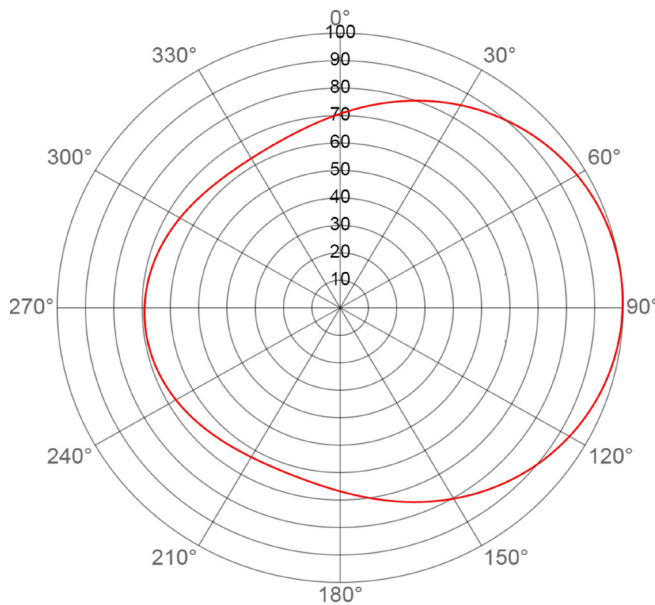
Modification Compliance: 0.0 km from authorized digital Ch. 17 site
42.3 km from licensed analog Ch. 14 site
Contour comparison in Figure 2
TVStudy Analysis report in Table 2
(Study cell size: 0.50 km Profile point spacing: 0.10 km)

Contingent Application Rule: No waiver required, not dependent on spectrum to be vacated

RF Exposure: The calculated signal density near the tower at two meters above ground level attributable to the proposed facility is 0.6 percent of the general population/uncontrolled maximum permitted exposure limit. Calculations conducted pursuant to FCC OET Bulletin Number 65 and incorporate 15 percent relative field at downward angles (from antenna elevation pattern data). This is below the five percent threshold limit described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal's contribution is less than five percent.

Chesapeake RF Consultants, LLC

Joseph M. Davis, P.E. April 16, 2019
207 Old Dominion Road Yorktown, VA 23692 703-650-9600



Horizontal Polarization AZIMUTH PATTERN

Exhibit No.

Date **16 Apr 2019**Call Letters **KWYM-LP**Channel **25**Antenna Type **B**Location **Laramie WY**Customer **Gray TV**Gain **1.7 (2.30 dB)****Calculated**Drawing # **b-pattern**

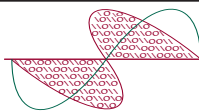
Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.707	36	0.880	72	0.991	108	0.972	144	0.833	180	0.668	216	0.633	252	0.686	288	0.673	324	0.627
1	0.711	37	0.884	73	0.992	109	0.970	145	0.828	181	0.665	217	0.634	253	0.687	289	0.672	325	0.627
2	0.715	38	0.889	74	0.993	110	0.967	146	0.823	182	0.662	218	0.635	254	0.688	290	0.670	326	0.627
3	0.720	39	0.893	75	0.995	111	0.964	147	0.818	183	0.659	219	0.637	255	0.689	291	0.669	327	0.627
4	0.724	40	0.897	76	0.996	112	0.962	148	0.813	184	0.656	220	0.638	256	0.689	292	0.667	328	0.627
5	0.729	41	0.902	77	0.997	113	0.959	149	0.808	185	0.653	221	0.639	257	0.690	293	0.666	329	0.628
6	0.734	42	0.906	78	0.997	114	0.956	150	0.803	186	0.651	222	0.641	258	0.690	294	0.664	330	0.628
7	0.738	43	0.910	79	0.998	115	0.953	151	0.798	187	0.648	223	0.642	259	0.691	295	0.662	331	0.629
8	0.743	44	0.914	80	0.999	116	0.950	152	0.793	188	0.646	224	0.644	260	0.691	296	0.661	332	0.630
9	0.748	45	0.918	81	0.999	117	0.946	153	0.788	189	0.643	225	0.646	261	0.692	297	0.659	333	0.631
10	0.753	46	0.922	82	0.999	118	0.943	154	0.783	190	0.641	226	0.647	262	0.692	298	0.657	334	0.632
11	0.758	47	0.925	83	1.000	119	0.940	155	0.778	191	0.639	227	0.649	263	0.692	299	0.655	335	0.633
12	0.763	48	0.929	84	1.000	120	0.936	156	0.773	192	0.638	228	0.650	264	0.692	300	0.654	336	0.635
13	0.768	49	0.933	85	1.000	121	0.933	157	0.768	193	0.636	229	0.652	265	0.692	301	0.652	337	0.636
14	0.773	50	0.936	86	1.000	122	0.929	158	0.763	194	0.635	230	0.654	266	0.692	302	0.650	338	0.638
15	0.778	51	0.940	87	1.000	123	0.925	159	0.758	195	0.633	231	0.655	267	0.692	303	0.649	339	0.639
16	0.783	52	0.943	88	0.999	124	0.922	160	0.753	196	0.632	232	0.657	268	0.692	304	0.647	340	0.641
17	0.788	53	0.946	89	0.999	125	0.918	161	0.748	197	0.631	233	0.659	269	0.692	305	0.646	341	0.643
18	0.793	54	0.950	90	0.999	126	0.914	162	0.743	198	0.630	234	0.661	270	0.691	306	0.644	342	0.646
19	0.798	55	0.953	91	0.998	127	0.910	163	0.738	199	0.629	235	0.662	271	0.691	307	0.642	343	0.648
20	0.803	56	0.956	92	0.997	128	0.906	164	0.734	200	0.628	236	0.664	272	0.690	308	0.641	344	0.651
21	0.808	57	0.959	93	0.997	129	0.902	165	0.729	201	0.628	237	0.666	273	0.690	309	0.639	345	0.653
22	0.813	58	0.962	94	0.996	130	0.897	166	0.724	202	0.627	238	0.667	274	0.689	310	0.638	346	0.656
23	0.818	59	0.964	95	0.995	131	0.893	167	0.720	203	0.627	239	0.669	275	0.689	311	0.637	347	0.659
24	0.823	60	0.967	96	0.993	132	0.889	168	0.715	204	0.627	240	0.670	276	0.688	312	0.635	348	0.662
25	0.828	61	0.970	97	0.992	133	0.884	169	0.711	205	0.627	241	0.672	277	0.687	313	0.634	349	0.665
26	0.833	62	0.972	98	0.991	134	0.880	170	0.707	206	0.627	242	0.673	278	0.686	314	0.633	350	0.668
27	0.837	63	0.974	99	0.990	135	0.875	171	0.702	207	0.627	243	0.675	279	0.685	315	0.632	351	0.672
28	0.842	64	0.977	100	0.988	136	0.871	172	0.698	208	0.627	244	0.676	280	0.684	316	0.631	352	0.675
29	0.847	65	0.979	101	0.986	137	0.866	173	0.694	209	0.628	245	0.678	281	0.683	317	0.630	353	0.679
30	0.852	66	0.981	102	0.985	138	0.861	174	0.690	210	0.628	246	0.679	282	0.682	318	0.629	354	0.682
31	0.857	67	0.983	103	0.983	139	0.857	175	0.686	211	0.629	247	0.680	283	0.680	319	0.629	355	0.686
32	0.861	68	0.985	104	0.981	140	0.852	176	0.682	212	0.629	248	0.682	284	0.679	320	0.628	356	0.690
33	0.866	69	0.986	105	0.979	141	0.847	177	0.679	213	0.630	249	0.683	285	0.678	321	0.628	357	0.694
34	0.871	70	0.988	106	0.977	142	0.842	178	0.675	214	0.631	250	0.684	286	0.676	322	0.627	358	0.698
35	0.875	71	0.990	107	0.974	143	0.837	179	0.672	215	0.632	251	0.685	287	0.675	323	0.627	359	0.702

Figure 1
Antenna Azimuthal Pattern
KWYM-LP Laramie, WY
Facility ID 128717
Ch. 25 (digital) 15 kW

prepared for
Gray Television Licensee, LLC

April, 2019





Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 2
Coverage Contour Comparison
KWYM-LP Laramie, WY
Facility ID 128717
Ch. 25 (digital) 15 kW

prepared for
Gray Television Licensee, LLC

April, 2019

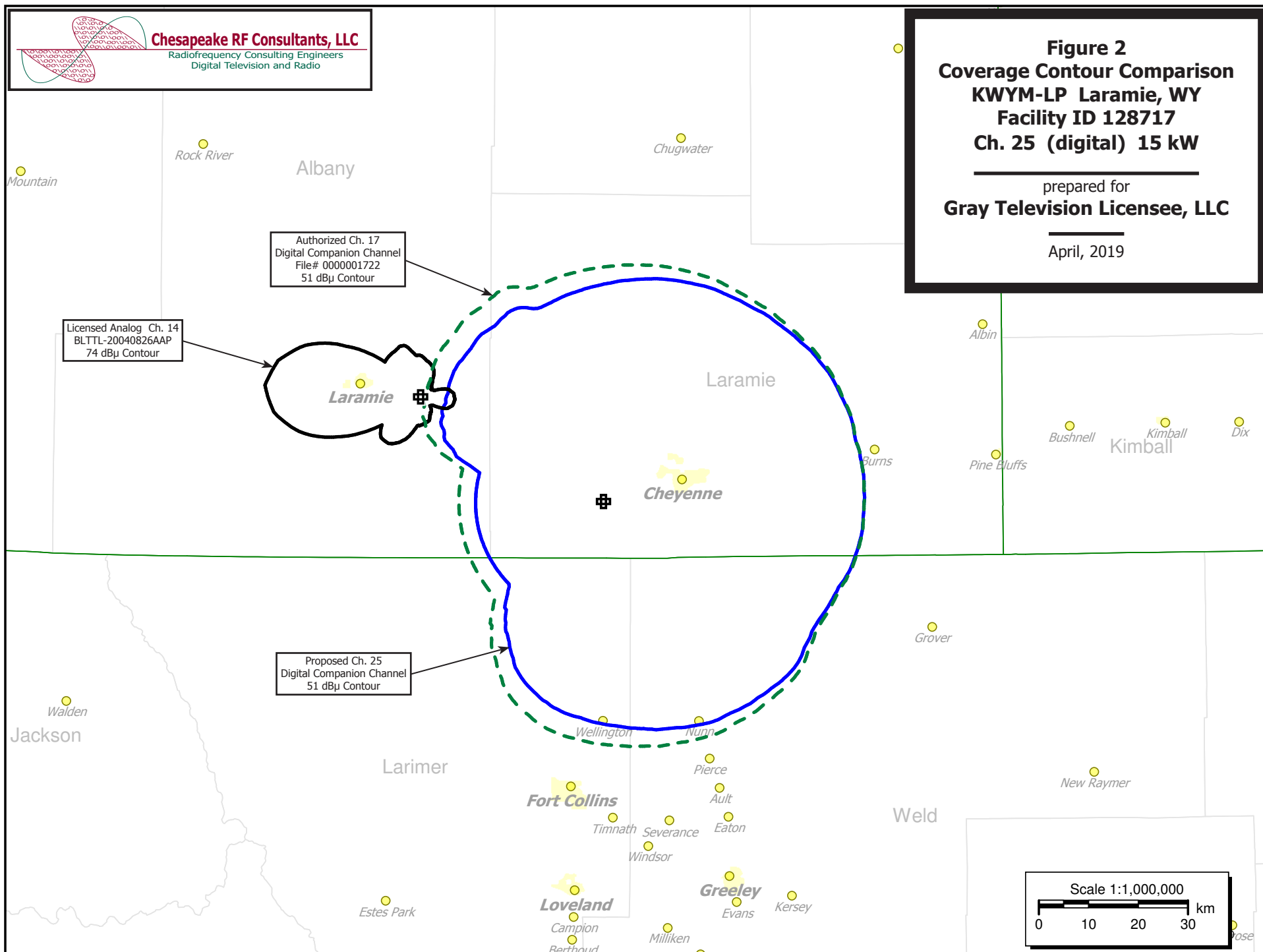
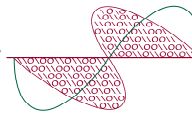


Table 1 KWYM-LP Ch. 17 TVStudy Displacement Summary
(page 1 of 1)



Interference caused to KPJR-TV Repack Ch. 17 Greeley CO

Interference to BLANK0000026606 CP scenario 1

****IX: 1.21% interference caused**

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KPJR-TV	D17	DT	CP	GREELEY, CO	BLANK0000026606	
Undesireds:	KWYM-LP	D17z	LD	CP	LARAMIE, WY	BLANK0000001722	111.6 km
	KQDK-CD	D16	DC	CP	DENVER, CO	BLANK0000034215	47.2
	KLBY	D17	DT	LIC	COLBY, KS	BLCDT20081215ABD	317.8
	KPXC-TV	D18	DT	CP	DENVER, CO	BLANK0000027023	0.4
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	29632.4 3,402,358	27385.2	3,374,431	27037.7	3,373,335	23606.8 3,332,463	12.69 1.21
Undesired				Total IX	Unique IX, before	Unique IX, after	
KWYM-LP D17z LD CP		3686.7		41,618		3430.9	40,872
KQDK-CD D16 DC CP		3.0		0	3.0	1.0	0
KLBY D17 DT LIC		254.1		129	252.1	38.0	26
KPXC-TV D18 DT CP		92.4		982	90.4	52.7	324

Table 2 KWYM-LP TVStudy Analysis of Proposal

(page 1 of 4)



tvstudy v2.2.5 (4uoc83)
 Database: localhost, Study: KWYM-LP Ch-25 85-deg 0.5-0.1, Model: Longley-Rice
 Start: 2019.04.16 17:07:35

Study created: 2019.04.16 17:07:35

Study build station data: LMS TV 2019-04-14

Proposal: KWYM-LP D25 LD APP Laramie, WY
 File number: KWYM-LP Ch-25 85-deg
 Facility ID: 128717
 Station data: User record
 Record ID: 2673
 Country: U.S.

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

Search options:
 Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K24HQ-D	D24	LD	LIC	BOULDER, CO	BLANK0000034173	127.9 km
No	KRDO-TV	D24	DT	LIC	COLORADO SPRINGS, CO	BLCDT20060329AAW	262.0
No	KMLN-LD	D24	LD	LIC	FORT COLLINS, CO	BLDTL20130709ABW	69.0
No	KPAH-LP	N24z	TX	LIC	LARAMIE, WY	BLTTA20030519ACB	42.0
Yes	KPXH-LD	D25	LD	LIC	FORT COLLINS, CO	BLDTL20111110AJH	63.3
Yes	K25LA-D	D25	LD	LIC	FORT MORGAN, CO	BLANK0000010537	123.9
No	K25FZ	D25	LD	CP	GRAND JUNCTION, CO	BDFCDTT20100524AAC	390.0
No	K25GZ-D	D25	LD	LIC	HOLYOKE, CO	BLDTT20110613AAP	232.2
No	K38LK-D	D25	LD	CP	JACKS CABIN, CO	BLANK0000054545	306.6
Yes	KOAA-TV	D25	DT	CP	PUEBLO, CO	BLANK0000030611	262.1
No	K25PT-D	D25	LD	LIC	SARGENTS, CO	BLANK0000063157	310.3
No	K25MR-D	D25	LD	LIC	SNOWMASS VILLAGE, CO	BLDTT20120604AAD	264.3
No	KNPL-LD	D25	LD	CP	NORTH PLATTE, NE	BLANK0000036559	357.8
No	KNPL-LD	D25	LD	LIC	NORTH PLATTE, NE	BLDTL20140224ABR	355.9
No	K25ME-D	D25	LD	CP	CASPER, WY	BNPDTL20100510ACS	247.7
Yes	KHDE-LP	N25z	TX	LIC	LARAMIE, WY	BLTTL20080124AES	40.1
No	K25MY-D	D25	LD	CP	SUNDANCE, WY	BDISDTL20110811ABJ	369.3
Yes	K25NC-D	D25	LD	CP	WHEATLAND, WY	BNPDTL20100510AEN	86.5
No	K25LI-D	D25	LD	LIC	WRIGHT, WY	BLDTT20100617AJX	300.4
No	KKTV	D26	DT	CP	COLORADO SPRINGS, CO	BLANK0000067487	262.1
No	K26FM-D	D26	LD	LIC	PEETZ, CO	BLDTT20110928AKL	150.9
No	KZFC-LP	D26-	LD	CP	WINDSOR, CO	BLANK0000054178	72.0
Yes	K26KR-D	D26	LD	CP	CHEYENNE, WY	BNPDTL20100324ACJ	6.8

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D25
 Mask: Full Service
 Latitude: 41 6 0.40 N (NAD83)
 Longitude: 105 0 25.20 W
 Height AMSL: 2156.2 m
 HAAT: 0.0 m
 Peak ERP: 15.0 kW
 Antenna: DIE DLP-B 85.0 deg
 Elev Pattn: Generic
 Elec Tilt: 1.50

49.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	7.51 kW	156.0 m	45.0 km
45.0	12.6	220.1	51.4
90.0	14.9	242.0	53.5
135.0	11.5	238.4	52.0
180.0	6.72	180.7	45.9
225.0	6.26	38.6	28.9

Table 2 KWYM-LP TV Study Analysis of Proposal
(page 2 of 4)



270.0 7.15 -29.2 27.1
315.0 5.99 120.1 41.4

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 146 m

Distance to Canadian border: 878.0 km

Distance to Mexican border: 1044.3 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 89.9 degrees Distance: 552.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 189.6 degrees Distance: 110.7 km
ERP: 6.22 kW Field strength: 18.3 dBu, 0.0 mV/m

Study cell size: 0.50 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%

Interference to BLDL20111110AJH LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KPXH-LD	D25	LD	LIC	FORT COLLINS, CO	BLDL20111110AJH	
Undesireds:	KWYM-LP	D25	LD	APP	Laramie, WY	KWYM-LP Ch-25 85-deg	63.3 km
	KMLN-LD	D24	LD	LIC	FORT COLLINS, CO	BLDL20130709ABW	6.3
	K25LA-D	D25	LD	LIC	FORT MORGAN, CO	BLANK0000010537	72.8
	KOAA-TV	D25	DT	CP	PUEBLO, CO	BLANK0000030611	202.5
	K26KR-D	D26	LD	CP	CHEYENNE, WY	BNPDL20100324ACJ	69.7
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
6846.2		522,047		6681.5		514,306	6.42 1.99
				513,107		6118.5	502,921
Undesired			Total IX		Unique IX, before		Unique IX, after
KWYM-LP D25 LD APP			504.7		10,617		419.9 10,186
KMLN-LD D24 LD LIC			0.2		0		0.2 0
K25LA-D D25 LD LIC			109.5		1,155		101.3 1,140
KOAA-TV D25 DT CP			7.0		15		1.5 0
K26KR-D D26 LD CP			34.8		44		31.9 44
						0.7	0

Interference to BLANK0000010537 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K25LA-D	D25	LD	LIC	FORT MORGAN, CO	BLANK0000010537	
Undesireds:	KWYM-LP	D25	LD	APP	Laramie, WY	KWYM-LP Ch-25 85-deg	123.9 km
	KPXH-LD	D25	LD	LIC	FORT COLLINS, CO	BLDL20111110AJH	72.8
	KOAA-TV	D25	DT	CP	PUEBLO, CO	BLANK0000030611	141.0
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
2158.1		239,476		2090.0		220,404	1.16 0.04
				779.8		137,367	770.7 137,312
Undesired			Total IX		Unique IX, before		Unique IX, after
KWYM-LP D25 LD APP			727.0		34,843		9.1 55
KPXH-LD D25 LD LIC			1306.8		83,037		1071.7 75,905
KOAA-TV D25 DT CP			238.5		7,132		3.4 0
						1.2	0

Interference to BLANK0000030611 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KOAA-TV	D25	DT	CP	PUEBLO, CO	BLANK0000030611	

Table 2 KWYM-LP TVStudy Analysis of Proposal
(page 3 of 4)



Undesireds:	KWYM-LP	D25	LD	APP	Laramie, WY	KWYM-LP Ch-25 85-deg	262.1 km
	KRDO-TV	D24	DT	LIC	COLORADO SPRINGS, CO	BLCDT20060329AAW	0.1
	KVSN-DT	D25	DT	BL	PUEBLO, CO	DTVBL166331	0.1
	KKTV	D26	DT	CP	COLORADO SPRINGS, CO	BLANK0000067487	0.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
37882.7 1,591,402	35418.7 1,220,128	8772.1 219,461	8762.7 218,410	0.11 0.48

Undesired	Total IX	Unique IX, before	Unique IX, after
KWYM-LP D25 LD APP	718.5 140,680	9.4 1,051	9.4 1,051
KRDO-TV D24 DT LIC	0.7 0	0.0 0	0.0 0
KVSN-DT D25 DT BL	26646.3 1,000,667	26626.9 998,717	25918.1 859,471
KKTV D26 DT CP	19.4 1,950	0.2 0	0.2 0

Interference to BLTTL20080124AES LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KHDE-LP	N25z	TX	LIC	LARAMIE, WY	BLTTL20080124AES	
Undesireds:	KWYM-LP	D25	LD	APP	Laramie, WY	KWYM-LP Ch-25 85-deg	40.1 km
	KPXH-LD	D25	LD	LIC	FORT COLLINS, CO	BLDTL20111110AJH	64.0

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
624.4 243	570.0 218	566.4 218	565.9 218	0.09 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
KWYM-LP D25 LD APP	1.4 0	0.5 0	0.5 0
KPXH-LD D25 LD LIC	3.6 0	3.6 0	2.7 0

Interference to BNPDTL20100510AEN CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	K25NC-D	D25	LD	CP	WHEATLAND, WY	BNPDTL20100510AEN	
Undesireds:	KWYM-LP	D25	LD	APP	Laramie, WY	KWYM-LP Ch-25 85-deg	86.5 km

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
1447.1 6,124	1201.3 4,744	1201.3 4,744	1186.9 4,675	1.20 1.45

Undesired	Total IX	Unique IX, before	Unique IX, after
KWYM-LP D25 LD APP	14.4 69	14.4 69	14.4 69

Interference to BNPDTL20100324ACJ CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	K26KR-D	D26	LD	CP	CHEYENNE, WY	BNPDTL20100324ACJ	
Undesireds:	KWYM-LP	D25	LD	APP	Laramie, WY	KWYM-LP Ch-25 85-deg	6.8 km
	KPXH-LD	D25	LD	LIC	FORT COLLINS, CO	BLDTL20111110AJH	69.7
	KKTV	D26	DT	CP	COLORADO SPRINGS, CO	BLANK0000067487	267.3
	KZFC-LP	D26-	LD	CP	WINDSOR, CO	BLANK0000054178	77.1
	K26CV	D26	LD	CP	OGALLALA, NE	BDFCDTL20120319AAW	310.2
	KLWY	D27	DT	LIC	CHEYENNE, WY	BLCDT20090227AAD	12.2

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
4397.8 88,847	3796.8 88,561	3306.6 88,247	3295.6 88,243	0.33 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
KWYM-LP D25 LD APP	70.0 9	11.0 4	11.0 4
KPXH-LD D25 LD LIC	220.2 129	2.9 0	2.9 0
KKTV D26 DT CP	43.2 1	2.7 0	2.7 0
KZFC-LP D26- LD CP	242.5 175	7.5 0	7.3 0
KLWY D27 DT LIC	466.1 314	200.6 120	189.2 120

Interference to proposal scenario 1
10.42% interference received

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KWYM-LP	D25	LD	APP	Laramie, WY	KWYM-LP Ch-25 85-deg	

Table 2 KWYM-LP TV Study Analysis of Proposal
(page 4 of 4)



Undesireds:	KPXH-LD	D25	LD	LIC	FORT COLLINS, CO	BLDTL20111110AJH	63.3 km
	K25LA-D	D25	LD	LIC	FORT MORGAN, CO	BLANK0000010537	123.9
	KOAA-TV	D25	DT	CP	PUEBLO, CO	BLANK0000030611	262.1
	KHDE-LP	N25z	TX	LIC	LARAMIE, WY	BLTTL20080124AES	40.1
	K26KR-D	D26	LD	CP	CHEYENNE, WY	BNPDTL20100324ACJ	6.8

Service area		Terrain-limited		IX-free		Percent IX	
6170.7	99,149	5727.3	98,995	4472.4	88,680	21.91	10.42
Undesired		Total IX		Unique IX		Prcnt Unique IX	
KPXH-LD	D25 LD LIC	1216.2	9,984	1059.5	9,890	18.50	9.99
K25LA-D	D25 LD LIC	163.2	196	10.9	102	0.19	0.10
KOAA-TV	D25 DT CP	7.7	0	0.0	0	0.00	0.00
KHDE-LP	N25z TX LIC	6.5	0	3.4	0	0.06	0.00
K26KR-D	D26 LD CP	25.1	229	24.4	229	0.43	0.23