

ENGINEERING EXHIBIT

Application for Minor Modification of Digital Low Power Television Station Construction Permit

prepared for

Gray Television Licensee, LLC

KYCW-LD Branson, MO

Facility ID 11135

Ch. 25 (digital) 15 kW

Gray Television Licensee, LLC (“Gray”) is the licensee of digital Low Power Television station KYCW-LD, Channel 25, Branson MO, Facility ID 11135 (file# 0000022105). A Construction Permit (“CP” file# 0000022132) authorizes KYCW-LD to relocate 24.1 km (15.0 miles) to another tower location and operate with 15 kW effective radiated power (“ERP”), directional. *Gray* herein seeks to modify the CP to reduce antenna height and change directional pattern.

As with the current CP, KYCW-LD will be relocated to the tower structure associated with FCC Antenna Structure Registration number 1218324. The proposed KYCW-LD facility will utilize a new antenna system to be side-mounted on the tower and no change to the overall structure height is proposed.

The proposed KYCW-LD facility will operate at 15 kW ERP using a “full service” out of channel emission mask. A plot of the directional antenna’s azimuthal and elevation patterns are supplied in Figures 1 and 2, respectively. The antenna will utilize 1.5 degrees electrical beamtilt and 0.5 degree mechanical beamtilt towards 210 degrees True. Figure 3 depicts the 51 dBμ coverage contour of the licensed, authorized, and proposed facilities, demonstrating compliance with §74.787(b) for a minor change.

Interference study per OET Bulletin 69¹ shows that the proposal complies with the FCC’s interference protection requirements toward pertinent nearby post-auction digital television,

¹FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for*

television translator, LPTV, and Class A stations. The results, summarized in Table 1, show that any new interference does not exceed the FCC's interference limits (0.5 percent to full power and Class A stations, and 2.0 percent to secondary stations) to any facility. **FCC processing of this proposal is requested using a 1.0 km cell size and 0.1 km terrain profile increment.**

The proposal would result in 2.51 percent additional interference to the licensed, pre-auction KOZJ(DT) Channel 25 facility (Facility ID 51101, Joplin MO, BLEDT-20060620ABP). KOZJ was reassigned to Channel 35, and its post-auction facility is not a conflict for KYCW-LD. Accordingly, *Gray* will not implement the proposed KYCW-LD facility until after KOZJ ceases operation on Channel 25, and will accept a corresponding special operating condition on the CP authorization.

The nearest FCC monitoring station is 632 km distant at Grand Island, NE. This exceeds by a large margin the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. The site is not located within the areas requiring coordination with “quiet” zones specified in §73.1030(a) and (b). There are no authorized AM stations within 3 kilometers of the site. The site location is beyond the border areas requiring international coordination.

Human Exposure to Radiofrequency Electromagnetic Field

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the FCC's OET Bulletin Number 65. Based on OET-65 equation (10), and considering 25 percent antenna relative field in downward elevations (pattern data shows less than 25 percent relative field at angles 10 to 90 degrees below the antenna), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is $0.13 \mu\text{W}/\text{cm}^2$, which is 0.04 percent of the general population/uncontrolled maximum

Evaluating TV Coverage and Interference, February 6, 2004 (“OET-69”). This analysis employed the FCC's current “TVStudy” software with the default application processing template settings, 1 km cell size, and **0.1 km terrain increment**. Comparisons of various results of this computer program (run on a Mac processor) to the FCC's implementation of TVStudy show excellent correlation. In order to allow the upload of elevation pattern data, a response of “Yes” is provided in the accompanying Form 2100 Antenna Technical Data section question regarding whether the elevation pattern varies for reasons other than the use of mechanical beamtilt.

permitted exposure limit. 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.

The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower, or antenna from RF electromagnetic field exposure in excess of FCC guidelines. Environmental matters covered by this exhibit are limited to the evaluation of exposure to RF electromagnetic field.

List of Attachments

Figure 1	Antenna Azimuthal Pattern
Figure 2	Antenna Elevation Pattern
Figure 3	Proposed Coverage Contours
Table 1	OET Bulletin 69 Interference Study
Form 2100	Saved Version of Engineering Sections from FCC Form at Time of Upload

Chesapeake RF Consultants, LLC

Joseph M. Davis, P.E.	December 19, 2017	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600

AZIMUTH PATTERN

Type: ALP-WR

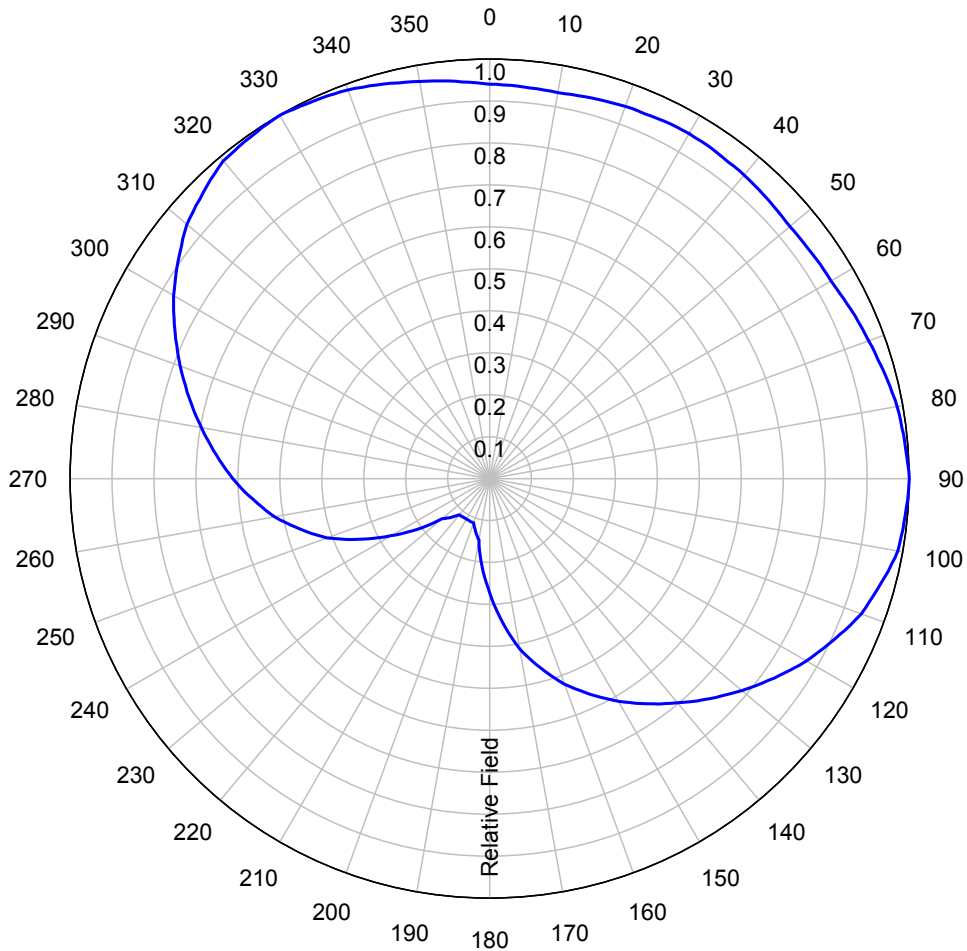
	Numeric	dBd
Directivity:	1.69	2.28
Peak(s) at:		

Channel: 25

Location: Springfield MO

Polarization: Horizontal

Note: Pattern shape and directivity may vary with channel and mouting configuration.



Preliminary, subject to final design and review.

ELECTRONICS RESEARCH, INC. **ERI**



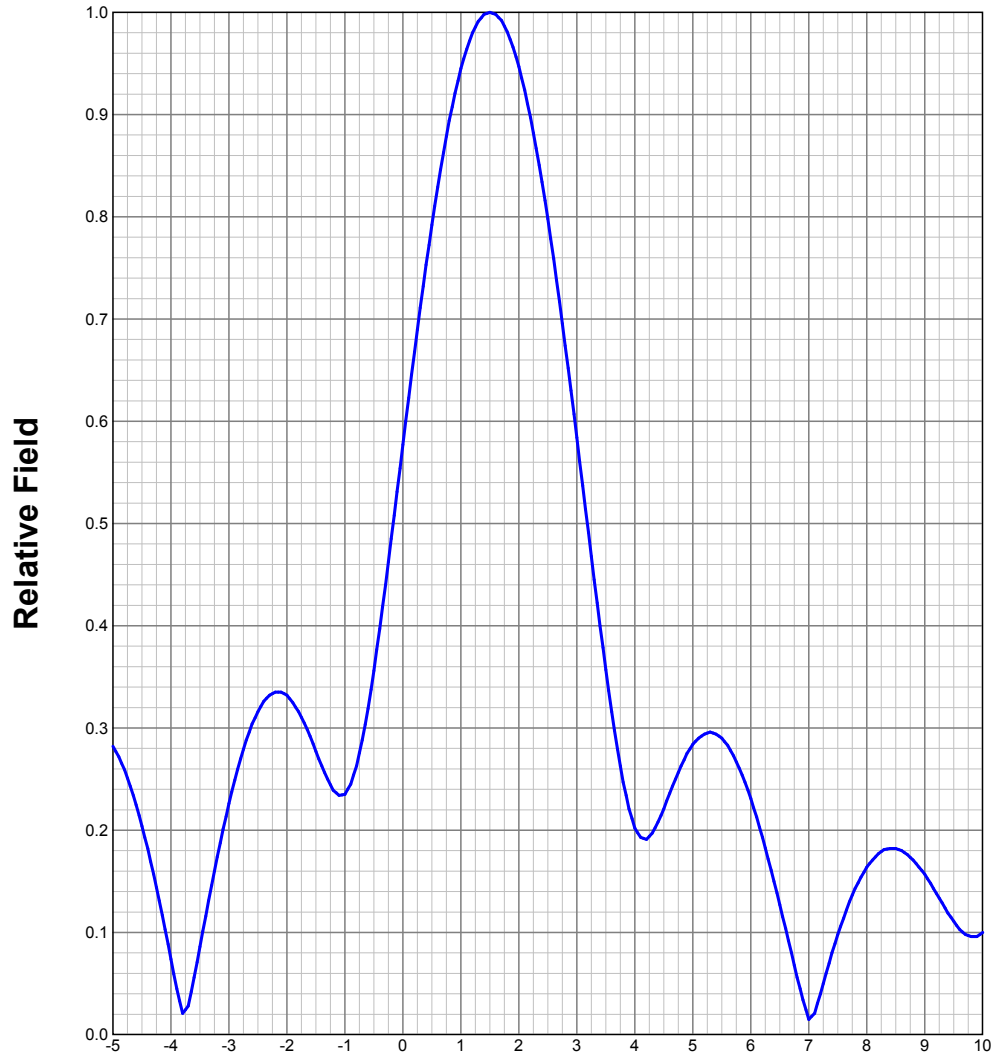
Figure 1
Antenna Azimuthal Pattern - Main Beam
Without Mechanical Beamtilt
KYCW-LD Branson, MO
Facility ID 11135
Ch. 25 (digital) 15 kW

prepared for
Gray Television Licensee, LLC

December, 2017

ELEVATION PATTERN

Type:	ALP16M6		Channel:	25
Directivity:	Numeric	dBd	Location:	Springfield MO
Main Lobe:	16.59	12.20	Beam Tilt:	-1.50
Horizontal:	5.52	7.42	Polarization:	Horizontal



Preliminary, subject to final design and review.

ELECTRONICS RESEARCH, INC. **ERI**



Figure 2
Antenna Elevation Pattern
Without Mechanical Beamtilt
KYCW-LD Branson, MO
Facility ID 11135
Ch. 25 (digital) 15 kW

prepared for
Gray Television Licensee, LLC

December, 2017

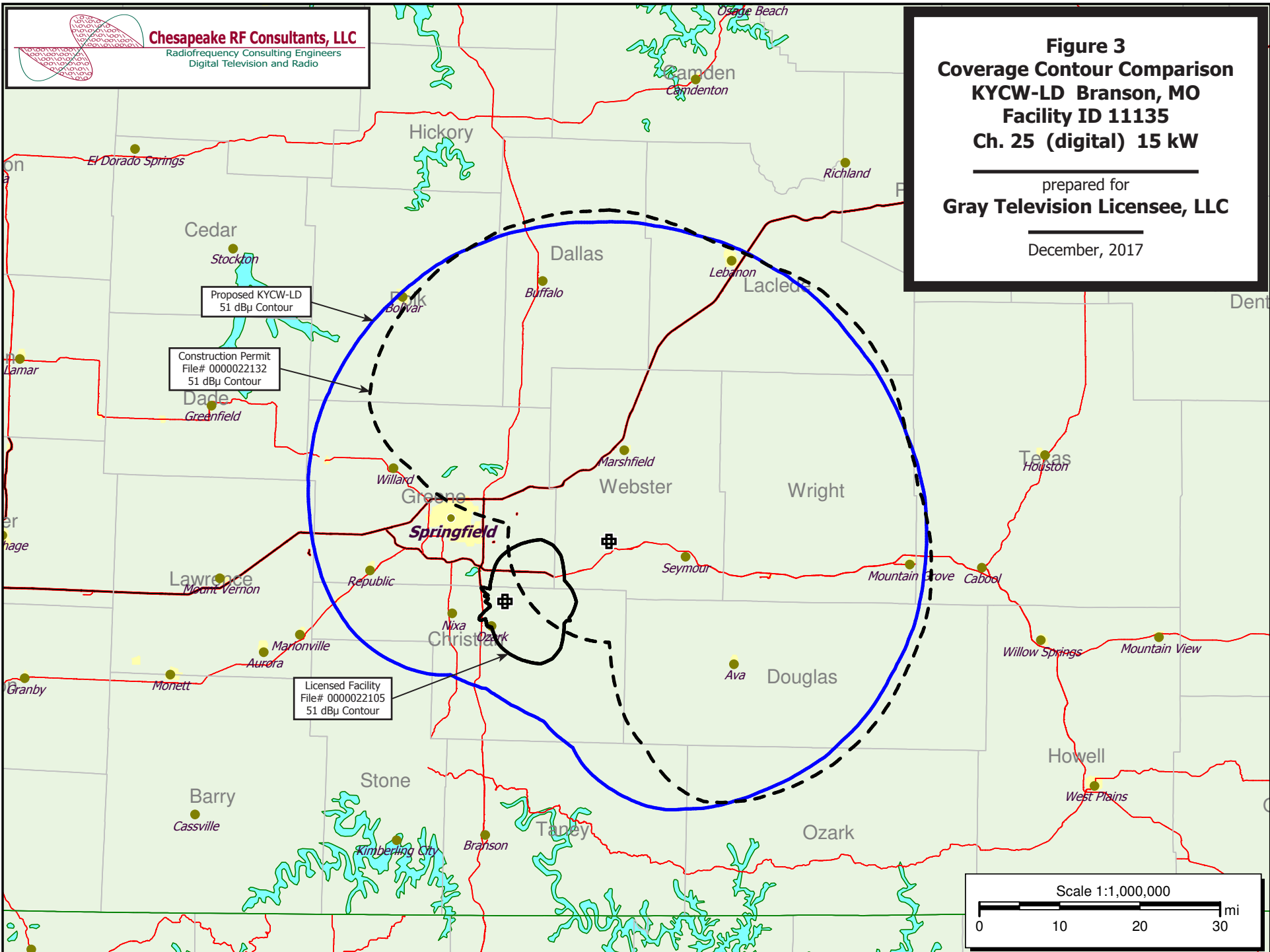


Table 1 KYCW-LD OET Bulletin 69 Interference Study
(page 1 of 8)



tvstudy v2.2.4 (Z2Qqz3)
Database: localhost, Study: KYCW-LD WR030 050MBT210 PROP, Model: Longley-Rice
Start: 2017.12.19 13:05:53

Study created: 2017.12.19 13:05:52

Study build station data: LMS TV 2017-12-18 LMSTV

Proposal: KYCW-LD D25 LD APP BRANSON, MO
File number: KYCW-LD WR030 050MBT210
Facility ID: 11135
Station data: User record
Record ID: 1605
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	K21JS	N21	TX	LIC	HARRISON, AR	BLTTL20111121DXG	106.4 km
No	KKAF-CD	D24	DC	CP	SILAM SPRINGS, AR	BLANK0000034437	159.5
No	KCTV	D24	DT	LIC	KANSAS CITY, MO	BLCDT20110405ABD	255.0
Yes	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210	123.7
No	KJNM-LD	D25	LD	CP	FAYETTEVILLE, AR	BLANK0000010834	159.3
No	KFDF-CD	D25	DC	CP	FORT SMITH, AR	BLANK0000034445	230.4
No	KCKS-LD	D25	LD	LIC	KANSAS CITY, KS	BLANK0000004587	276.0
Yes	KMCI-TV	D25	DT	CP	LAWRENCE, KS	BLANK0000034675	244.2
No	WDKA	D25	DT	CP	PADUCAH, KY	BLANK0000025681	354.7
No	WDKA	D25	DT	APP	PADUCAH, KY	BLANK0000034371	354.7
No	K25NS-D	D25	LD	CP	CAPE GIRARDEAU, MO	BNPDTL20100907ABZ	265.4
No	K25NR-D	D25	LD	CP	COLUMBIA, MO	BLANK0000001278	188.4
Yes	KOZJ	D25	DT	LIC	JOPLIN, MO	BLEDT20060620ABP	141.9
No	K25NG-D	D25	DC	LIC	ST. LOUIS, MO	BLDTL20130805ABR	287.5
No	K25GJ	N25+	TX	LIC	MUSKOGEE, OK	BLTT20051206ADA	267.8
No	KGCT-CD	D25	DC	LIC	NOWATA, OK	BLDTA20091222AAA	245.4
No	KWTV-DT	D25	DT	CP	OKLAHOMA CITY, OK	BLANK0000028029	443.0
No	K25MA-D	D25	LD	CP	PONCA CITY, OK	BNPDTL20100216AAZ	417.1
No	KUTU-CD	D25	DC	LIC	TULSA, OK	BLDTA20110506AAV	294.7
No	K25MB-D	D25	LD	CP	VIAN, OK	BNPDTL20100504ALY	259.9
No	WATN-TV	D25	DT	LIC	MEMPHIS, TN	BLCDT20050628AAP	353.5
No	K26GS-D	D26	LD	LIC	HARRISON, AR	BLDTL20100517AFK	118.4
No	K26KT-D	D26	LD	CP	ELDON, MO	BNPDTL20090825BVM	134.5
No	K26KU-D	D26	LD	CP	MARSHALL, MO	BNPDTL20090825BXR	216.7
No	K26KV-D	D26	LD	CP	SEDALIA, MO	BNPDTL20090825BWL	162.2

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D25
Mask: Full Service
Latitude: 37 10 26.00 N (NAD83)
Longitude: 92 56 28.10 W
Height AMSL: 961.6 m
HAAT: 0.0 m
Peak ERP: 15.0 kW
Antenna: ERI ALP-WR 30.0 deg
Elev Pattern: ERI ALP16 1.5degBT VRP
Tilts: elec 1.50, mech 0.50 @ 210.0 deg

49.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	12.1 kW	515.8 m	65.1 km
45.0	12.2	501.1	64.8
90.0	12.3	473.1	64.0
135.0	5.15	511.2	59.8
180.0	0.493	525.6	46.1
225.0	0.104	514.0	36.1
270.0	3.12	535.6	57.5

Table 1 KYCW-LD OET Bulletin 69 Interference Study
(page 2 of 8)



315.0 10.9 530.7 64.9

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 513 m

Distance to Canadian border: 993.1 km

Distance to Mexican border: 1135.8 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 313.0 degrees Distance: 630.6 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 290.8 degrees Distance: 1114.4 km

Study cell size: 1.00 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 BLANK0000034210 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210	
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km
	KKAF-CD	D24	DC	CP	SILOAM SPRINGS, AR	BLANK0000034437	36.3
	KFDF-CD	D25	DC	CP	FORT SMITH, AR	BLANK0000034445	113.3
	KMCI-TV	D25	DT	CP	LAWRENCE, KS	BLANK0000034675	289.8
	KWTV-DT	D25	DT	CP	OKLAHOMA CITY, OK	BLANK0000028029	330.5
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	15422.5 600,679	15024.6	596,515	14943.1	591,241	14828.6 588,636	0.77 0.44
Undesired			Total IX	Unique IX, before		Unique IX, after	
KYCW-LD D25 LD APP	116.5		2,620	114.5	2,605		
KKAF-CD D24 DC CP	23.3		3,119	23.3	3,119		
KFDF-CD D25 DC CP	24.1		188	21.1	161		
KMCI-TV D25 DT CP	21.0		1,716	18.0	1,689		
KWTV-DT D25 DT CP	16.1		278	16.1	278		

Interference to BLANK0000034210 CP scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210	
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km
	KKAF-CD	D24	DC	CP	SILOAM SPRINGS, AR	BLANK0000034437	36.3
	KFDF-CD	D25	DC	CP	FORT SMITH, AR	BLANK0000034445	113.3
	KMCI-TV	D25	DT	BL	LAWRENCE, KS	DTVBL42636	289.8
	KWTV-DT	D25	DT	CP	OKLAHOMA CITY, OK	BLANK0000028029	330.5
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	15422.5 600,679	15024.6	596,515	14951.1	591,427	14836.6 588,822	0.77 0.44
Undesired			Total IX	Unique IX, before		Unique IX, after	
KYCW-LD D25 LD APP	116.5		2,620	114.5	2,605		
KKAF-CD D24 DC CP	23.3		3,119	23.3	3,119		
KFDF-CD D25 DC CP	24.1		188	22.1	173		
KMCI-TV D25 DT BL	12.0		1,518	10.0	1,503		
KWTV-DT D25 DT CP	16.1		278	16.1	278		

Interference to BLANK0000034210 CP scenario 3

Table 1 KYCW-LD OET Bulletin 69 Interference Study
(page 3 of 8)



	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210	
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km
	KKAF-CD	D24	DC	CP	SILOAM SPRINGS, AR	BLANK0000034437	36.3
	KFDF-CD	D25	DC	CP	FORT SMITH, AR	BLANK0000034445	113.3
	KMCI-TV	D25	DT	CP	LAWRENCE, KS	BLANK0000034675	289.8
	KWTV-DT	D25	DT	BL	OKLAHOMA CITY, OK	DTVBL25382	330.5
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4
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	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	15422.5 600,679	15024.6	596,515	14944.1	591,241	14829.6 588,636	0.77 0.44

Undesired	Total IX	Unique IX, before	Unique IX, after
KYCW-LD D25 LD APP	116.5 2,620		114.5 2,605
KKAF-CD D24 DC CP	23.3 3,119	23.3 3,119	23.3 3,119
KFDF-CD D25 DC CP	24.1 188	21.1 161	21.1 161
KMCI-TV D25 DT CP	21.0 1,716	18.0 1,689	17.0 1,675
KWTV-DT D25 DT BL	15.1 278	15.1 278	15.1 278

Interference to BLANK0000034210 CP scenario 4

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210	
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km
	KKAF-CD	D24	DC	CP	SILOAM SPRINGS, AR	BLANK0000034437	36.3
	KFDF-CD	D25	DC	CP	FORT SMITH, AR	BLANK0000034445	113.3
	KMCI-TV	D25	DT	BL	LAWRENCE, KS	DTVBL42636	289.8
	KWTV-DT	D25	DT	BL	OKLAHOMA CITY, OK	DTVBL25382	330.5
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4
<hr/>							
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	15422.5 600,679	15024.6	596,515	14952.1	591,427	14837.6 588,822	0.77 0.44

Undesired	Total IX	Unique IX, before	Unique IX, after
KYCW-LD D25 LD APP	116.5 2,620		114.5 2,605
KKAF-CD D24 DC CP	23.3 3,119	23.3 3,119	23.3 3,119
KFDF-CD D25 DC CP	24.1 188	22.1 173	22.1 173
KMCI-TV D25 DT BL	12.0 1,518	10.0 1,503	9.0 1,489
KWTV-DT D25 DT BL	15.1 278	15.1 278	15.1 278

Interference to BLANK0000034210 CP scenario 5

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210	
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km
	KKAF-CD	D24	DC	CP	SILOAM SPRINGS, AR	BLANK0000034437	36.3
	KFDF-CD	D25	DC	BL	FORT SMITH, AR	DTVBL168154	113.4
	KMCI-TV	D25	DT	CP	LAWRENCE, KS	BLANK0000034675	289.8
	KWTV-DT	D25	DT	CP	OKLAHOMA CITY, OK	BLANK0000028029	330.5
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4
<hr/>							
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	15422.5 600,679	15024.6	596,515	14940.1	591,241	14825.5 588,636	0.77 0.44

Undesired	Total IX	Unique IX, before	Unique IX, after
KYCW-LD D25 LD APP	116.5 2,620		114.5 2,605
KKAF-CD D24 DC CP	23.3 3,119	23.3 3,119	23.3 3,119
KFDF-CD D25 DC BL	28.1 212	24.1 161	24.1 161
KMCI-TV D25 DT CP	21.0 1,716	18.0 1,689	17.0 1,675
KWTV-DT D25 DT CP	16.1 278	15.1 254	15.1 254

Interference to BLANK0000034210 CP scenario 6

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210	

Table 1 KYCW-LD OET Bulletin 69 Interference Study
(page 4 of 8)



Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km
	KKAF-CD	D24	DC	CP	SILOAM SPRINGS, AR	BLANK0000034437	36.3
	KFDF-CD	D25	DC	BL	FORT SMITH, AR	DTVBL168154	113.4
	KMCI-TV	D25	DT	BL	LAWRENCE, KS	DTVBL42636	289.8
	KWTV-DT	D25	DT	CP	OKLAHOMA CITY, OK	BLANK0000028029	330.5
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
15422.5 600,679	15024.6 596,515	14948.1 591,427	14833.6 588,822	0.77 0.44

Undesired	Total IX	Unique IX, before	Unique IX, after
KYCW-LD D25 LD APP	116.5 2,620	114.5 2,605	
KKAF-CD D24 DC CP	23.3 3,119	23.3 3,119	
KFDF-CD D25 DC BL	28.1 212	25.1 173	
KMCI-TV D25 DT BL	12.0 1,518	9.0 1,489	
KWTV-DT D25 DT CP	16.1 278	15.1 254	

Interference to BLANK0000034210 CP scenario 7

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210	
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km
	KKAF-CD	D24	DC	CP	SILOAM SPRINGS, AR	BLANK0000034437	36.3
	KFDF-CD	D25	DC	BL	FORT SMITH, AR	DTVBL168154	113.4
	KMCI-TV	D25	DT	CP	LAWRENCE, KS	BLANK0000034675	289.8
	KWTV-DT	D25	DT	BL	OKLAHOMA CITY, OK	DTVBL25382	330.5
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
15422.5 600,679	15024.6 596,515	14941.1 591,241	14826.6 588,636	0.77 0.44

Undesired	Total IX	Unique IX, before	Unique IX, after
KYCW-LD D25 LD APP	116.5 2,620	114.5 2,605	
KKAF-CD D24 DC CP	23.3 3,119	23.3 3,119	
KFDF-CD D25 DC BL	28.1 212	24.1 161	
KMCI-TV D25 DT CP	21.0 1,716	17.0 1,675	
KWTV-DT D25 DT BL	15.1 278	14.1 254	

Interference to BLANK0000034210 CP scenario 8

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210	
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km
	KKAF-CD	D24	DC	CP	SILOAM SPRINGS, AR	BLANK0000034437	36.3
	KFDF-CD	D25	DC	BL	FORT SMITH, AR	DTVBL168154	113.4
	KMCI-TV	D25	DT	BL	LAWRENCE, KS	DTVBL42636	289.8
	KWTV-DT	D25	DT	BL	OKLAHOMA CITY, OK	DTVBL25382	330.5
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
15422.5 600,679	15024.6 596,515	14949.1 591,427	14834.6 588,822	0.77 0.44

Undesired	Total IX	Unique IX, before	Unique IX, after
KYCW-LD D25 LD APP	116.5 2,620	114.5 2,605	
KKAF-CD D24 DC CP	23.3 3,119	23.3 3,119	
KFDF-CD D25 DC BL	28.1 212	25.1 173	
KMCI-TV D25 DT BL	12.0 1,518	9.0 1,489	
KWTV-DT D25 DT BL	15.1 278	14.1 254	

Interference to BLANK0000034210 CP scenario 9

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210	
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km
	KKAF-CD	D24	DC	BL	SILOAM SPRINGS, AR	DTVBL52432	58.0
	KFDF-CD	D25	DC	CP	FORT SMITH, AR	BLANK0000034445	113.3
	KMCI-TV	D25	DT	CP	LAWRENCE, KS	BLANK0000034675	289.8

Table 1 KYCW-LD OET Bulletin 69 Interference Study
(page 5 of 8)



	KWTV-DT	D25	DT	CP	OKLAHOMA CITY, OK	BLANK0000028029	330.5			
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4			
	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
15422.5	600,679	15024.6		596,515	14443.3	564,148	14328.8	561,543	0.79	0.46
Undesired				Total IX	Unique IX, before		Unique IX, after			
KYCW-LD	D25	LD	APP	116.5	2,620		114.5	2,605		
KKAF-CD	D24	DC	BL	535.2	30,490	523.1	30,212	523.1	30,212	
KFDF-CD	D25	DC	CP	24.1	188	20.1	161	20.1	161	
KMCI-TV	D25	DT	CP	21.0	1,716	18.0	1,689	17.0	1,675	
KWTV-DT	D25	DT	CP	16.1	278	5.0	0	5.0	0	

Interference to BLANK0000034210 CP scenario 10

Desired:	Call KXNW	Chan D25	Svc DT	Status CP	City, State EUREKA SPRINGS, AR	File Number BLANK0000034210	Distance		
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km		
	KKAF-CD	D24	DC	BL	SILOAM SPRINGS, AR	DTVBL52432	58.0		
	KFDF-CD	D25	DC	CP	FORT SMITH, AR	BLANK0000034445	113.3		
	KMCI-TV	D25	DT	BL	LAWRENCE, KS	DTVBL42636	289.8		
	KWTV-DT	D25	DT	CP	OKLAHOMA CITY, OK	BLANK0000028029	330.5		
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4		
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX		
15422.5	600,679	15024.6	596,515	14451.3	564,334	14336.8	561,729	0.79	0.46
Undesired				Total IX	Unique IX, before		Unique IX, after		
KYCW-LD	D25	LD	APP	116.5	2,620	114.5	2,605		
KKAF-CD	D24	DC	BL	535.2	30,490	523.1	30,212	523.1	30,212
KFDF-CD	D25	DC	CP	24.1	188	21.1	173	21.1	173
KMCI-TV	D25	DT	BL	12.0	1,518	10.0	1,503	9.0	1,489
KWTV-DT	D25	DT	CP	16.1	278	5.0	0	5.0	0

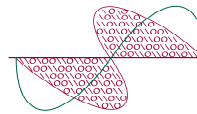
Interference to BLANK0000034210 CP scenario 11

Desired:	Call KXNW	Chan D25	Svc DT	Status CP	City, State EUREKA SPRINGS, AR	File Number BLANK0000034210	Distance		
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km		
	KKAF-CD	D24	DC	BL	SILOAM SPRINGS, AR	DTVBL52432	58.0		
	KFDF-CD	D25	DC	CP	FORT SMITH, AR	BLANK0000034445	113.3		
	KMCI-TV	D25	DT	CP	LAWRENCE, KS	BLANK0000034675	289.8		
	KWTV-DT	D25	DT	BL	OKLAHOMA CITY, OK	DTVBL25382	330.5		
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4		
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX		
15422.5	600,679	15024.6	596,515	14444.3	564,148	14329.8	561,543	0.79	0.46
Undesired				Total IX	Unique IX, before		Unique IX, after		
KYCW-LD	D25	LD	APP	116.5	2,620	114.5	2,605		
KKAF-CD	D24	DC	BL	535.2	30,490	523.1	30,212	523.1	30,212
KFDF-CD	D25	DC	CP	24.1	188	20.1	161	20.1	161
KMCI-TV	D25	DT	CP	21.0	1,716	18.0	1,689	17.0	1,675
KWTV-DT	D25	DT	BL	15.1	278	4.0	0	4.0	0

Interference to BLANK0000034210 CP scenario 12

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210	
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km
	KKAF-CD	D24	DC	BL	SILOAM SPRINGS, AR	DTVBL52432	58.0
	KFDF-CD	D25	DC	CP	FORT SMITH, AR	BLANK0000034445	113.3
	KMCI-TV	D25	DT	BL	LAWRENCE, KS	DTVBL42636	289.8
	KWTV-DT	D25	DT	BL	OKLAHOMA CITY, OK	DTVBL25382	330.5
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX

Table 1 KYCW-LD OET Bulletin 69 Interference Study
(page 6 of 8)



15422.5	600,679	15024.6	596,515	14452.3	564,334	14337.8	561,729	0.79	0.46
Undesired		Total IX		Unique IX, before		Unique IX, after			
KYCW-LD D25 LD APP	116.5		2,620			114.5	2,605		
KKAF-CD D24 DC BL	535.2		30,490	523.1	30,212	523.1	30,212		
KFDF-CD D25 DC CP	24.1		188	21.1	173	21.1	173		
KMCI-TV D25 DT BL	12.0		1,518	10.0	1,503	9.0	1,489		
KWTV-DT D25 DT BL	15.1		278	4.0	0	4.0	0		

Interference to BLANK0000034210 CP scenario 13

	Call	Chan	Svc	Status	City, State	File Number	Distance			
Desired:	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210				
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km			
	KKAF-CD	D24	DC	BL	SILOAM SPRINGS, AR	DTVBL52432	58.0			
	KFDF-CD	D25	DC	BL	FORT SMITH, AR	DTVBL168154	113.4			
	KMCI-TV	D25	DT	CP	LAWRENCE, KS	BLANK0000034675	289.8			
	KWTV-DT	D25	DT	CP	OKLAHOMA CITY, OK	BLANK0000028029	330.5			
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4			
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX		
15422.5	600,679	15024.6		596,515	14440.3	564,148	14325.7	561,543	0.79	0.46

Undesired		Total IX		Unique IX, before		Unique IX, after	
KYCW-LD D25 LD APP	116.5		2,620			114.5	2,605
KKAF-CD D24 DC BL	535.2		30,490	523.1	30,212	523.1	30,212
KFDF-CD D25 DC BL	28.1		212	23.1	161	23.1	161
KMCI-TV D25 DT CP	21.0		1,716	18.0	1,689	17.0	1,675
KWTV-DT D25 DT CP	16.1		278	5.0	0	5.0	0

Interference to BLANK0000034210 CP scenario 14

Desired:	Call KXNW	Chan D25	Svc DT	Status CP	City, State EUREKA SPRINGS, AR	File Number BLANK0000034210	Distance			
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km			
	KKAF-CD	D24	DC	BL	SILOAM SPRINGS, AR	DTVBL52432	58.0			
	KFDF-CD	D25	DC	BL	FORT SMITH, AR	DTVBL168154	113.4			
	KMCI-TV	D25	DT	BL	LAWRENCE, KS	DTVBL42636	289.8			
	KWTV-DT	D25	DT	CP	OKLAHOMA CITY, OK	BLANK0000028029	330.5			
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4			
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX		
15422.5	600,679	15024.6		596,515	14448.3	564,334	14333.8	561,729	0.79	0.46

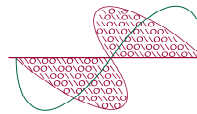
Undesired		Total IX		Unique IX, before		Unique IX, after	
KYCW-LD D25 LD APP	116.5		2,620			114.5	2,605
KKAF-CD D24 DC BL	535.2		30,490	523.1	30,212	523.1	30,212
KFDF-CD D25 DC BL	28.1		212	24.1	173	24.1	173
KMCI-TV D25 DT BL	12.0		1,518	10.0	1,503	9.0	1,489
KWTV-DT D25 DT CP	16.1		278	5.0	0	5.0	0

Interference to BLANK0000034210 CP scenario 15

	Call	Chan	Svc	Status	City, State	File Number	Distance			
Desired:	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210				
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km			
	KKAF-CD	D24	DC	BL	SILOAM SPRINGS, AR	DTVBL52432	58.0			
	KFDF-CD	D25	DC	BL	FORT SMITH, AR	DTVBL168154	113.4			
	KMCI-TV	D25	DT	CP	LAWRENCE, KS	BLANK0000034675	289.8			
	KWTV-DT	D25	DT	BL	OKLAHOMA CITY, OK	DTVBL25382	330.5			
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4			
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX		
15422.5	600,679	15024.6		596,515	14441.3	564,148	14326.8	561,543	0.79	0.46

Undesired		Total IX		Unique IX, before		Unique IX, after	
KYCW-LD D25 LD APP	116.5		2,620			114.5	2,605

Table 1 KYCW-LD OET Bulletin 69 Interference Study
(page 7 of 8)



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

KKAF-CD D24 DC BL	535.2	30,490	523.1	30,212	523.1	30,212
KFDF-CD D25 DC BL	28.1	212	23.1	161	23.1	161
KMCI-TV D25 DT CP	21.0	1,716	18.0	1,689	17.0	1,675
KWTV-DT D25 DT BL	15.1	278	4.0	0	4.0	0

Interference to BLANK0000034210 CP scenario 16

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210	
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	123.7 km
	KKAF-CD	D24	DC	BL	SILOAM SPRINGS, AR	DTVBL52432	58.0
	KFDF-CD	D25	DC	BL	FORT SMITH, AR	DTVBL168154	113.4
	KMCI-TV	D25	DT	BL	LAWRENCE, KS	DTVBL42636	289.8
	KWTV-DT	D25	DT	BL	OKLAHOMA CITY, OK	DTVBL25382	330.5
	KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	160.4
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
15422.5 600,679		15024.6 596,515		14449.3 564,334		14334.8 561,729	0.79 0.46
Undesired		Total IX		Unique IX, before		Unique IX, after	
KYCW-LD D25 LD APP		116.5 2,620		114.5 2,605			
KKAF-CD D24 DC BL		535.2 30,490		523.1 30,212			
KFDF-CD D25 DC BL		28.1 212		24.1 173			
KMCI-TV D25 DT BL		12.0 1,518		9.0 1,489			
KWTV-DT D25 DT BL		15.1 278		4.0 0			

Interference to BLANK0000034675 CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KMCI-TV	D25	DT	CP	LAWRENCE, KS	BLANK0000034675	
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	244.2 km
	KCTV	D24	DT	LIC	KANSAS CITY, MO	BLCDT20110405ABD	11.1
	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210	289.8
	KFDF-CD	D25	DC	CP	FORT SMITH, AR	BLANK0000034445	392.7
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
31291.7 2,423,221		31028.3 2,418,170		30975.8 2,416,903		30955.6 2,416,868	0.06 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
KYCW-LD D25 LD APP		21.1 35		20.1 35			
KCTV D24 DT LIC		51.6 1,267		51.6 1,267			
KXNW D25 DT CP		1.0 0		1.0 0			

Interference to BLANK0000034675 CP scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KMCI-TV	D25	DT	CP	LAWRENCE, KS	BLANK0000034675	
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	244.2 km
	KCTV	D24	DT	LIC	KANSAS CITY, MO	BLCDT20110405ABD	11.1
	KFDF-CD	D25	DC	CP	FORT SMITH, AR	BLANK0000034445	392.7
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
31291.7 2,423,221		31028.3 2,418,170		30976.8 2,416,903		30955.6 2,416,868	0.07 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
KYCW-LD D25 LD APP		21.1 35		21.1 35			
KCTV D24 DT LIC		51.6 1,267		51.6 1,267			

Interference to BLEDT20060620ABP LIC scenario 1

**IX: 2.44% interference caused

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KOZJ	D25	DT	LIC	JOPLIN, MO	BLEDT20060620ABP	
Undesireds:	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	141.9 km
	KXNW	D25	DT	CP	EUREKA SPRINGS, AR	BLANK0000034210	90.4

Table 1 KYCW-LD OET Bulletin 69 Interference Study
(page 8 of 8)



KMCI-TV	D25	DT	CP	LAWRENCE, KS	BLANK0000034675	211.3
KGCT-CD	D25	DC	LIC	NOWATA, OK	BLDTA20091222AAA	106.5
KWTV-DT	D25	DT	CP	OKLAHOMA CITY, OK	BLANK0000028029	311.2
KUTU-CD	D25	DC	LIC	TULSA, OK	BLDTA20110506AAV	165.6
KOTV-DT	D26	DT	CP	TULSA, OK	BLANK0000028019	155.3

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
17569.8 431,775	17534.6 431,587	15912.5 400,584	15513.6 390,799	2.51 2.44

Undesired	Total IX	Unique IX, before	Unique IX, after
KYCW-LD D25 LD APP 505.3	10,817	398.9	9,785
KXNW D25 DT CP 1361.6	27,546	1215.3	25,673
KMCI-TV D25 DT CP 367.7	5,141	244.4	3,366
KGCT-CD D25 DC LIC 20.0	6	8.0	0
KWTV-DT D25 DT CP 17.0	111	2.0	19
KUTU-CD D25 DC LIC 15.0	97	0.0	0
KOTV-DT D26 DT CP 18.1	175	1.0	0

Interference to proposal scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KYCW-LD	D25	LD	APP	BRANSON, MO	KYCW-LD WR030 050MBT21	
Undesireds:	KMCI-TV	D25	DT	CP	LAWRENCE, KS	BLANK0000034675	244.2 km
	WDKA	D25	DT	CP	PADUCAH, KY	BLANK0000025681	354.7
	WATN-TV	D25	DT	LIC	MEMPHIS, TN	BLCDT20050628AAP	353.5

Service area	Terrain-limited	IX-free	Percent IX
10650.5 475,495	10558.3 475,194	10546.1 475,079	0.12 0.02

Undesired	Total IX	Unique IX	Prcnt Unique IX
KMCI-TV D25 DT CP 12.1	115	11.1	99
WATN-TV D25 DT LIC 1.0	16	0.0	0

Channel and Facility Information

Section	Question	Response
Proposed Community of License	Facility ID	11135
	State	Missouri
	City	BRANSON
	LPD Channel	25

Antenna Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1218324
Coordinates (NAD83)	Latitude	37° 10' 26.0" N+
	Longitude	092° 56' 28.1" W-
	Structure Type	TOWER-A free standing or guyed struct
	Overall Structure Height	609.4 meters
	Support Structure Height	574.6 meters
	Ground Elevation (AMSL)	471.5 meters
Antenna Data	Height of Radiation Center Above Ground Level	490.1 meters
	Height of Radiation Center Above Mean Sea Level	961.6 meters
	Effective Radiated Power	15 kW

Antenna
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Directional Custom
	Do you have an Antenna ID?	No
	Antenna ID	
Antenna Manufacturer and Model	Manufacturer:	ERI
	Model	ALP16M6-HSWR-25
	Rotation	30 degrees
	Electrical Beam Tilt	1.5
	Mechanical Beam Tilt	0.5
	toward azimuth	210
	Polarization	Horizontal
Elevation Radiation Pattern	Does the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	Yes
	Uploaded file for elevation antenna (or radiation) pattern data	KYCW-LD ERI ALP16 1.5 degBT VRP.xml
	Out-of-Channel Emission Mask:	Full Service

Directional Antenna Relative Field Values (Pre-rotated Pattern)

Degree	V _A (Authorized Value)	Degree	V _A (Authorized Value)	Degree	V _A (Authorized Value)	Degree	V _A (Authorized Value)
0	0.950	90	0.870	180	0.111	270	0.870
10	0.944	100	0.785	190	0.112	280	0.942
20	0.934	110	0.697	200	0.148	290	0.988
30	0.940	120	0.612	210	0.272	300	1.000
40	0.961	130	0.521	220	0.412	310	0.986
50	0.986	140	0.412	230	0.521	320	0.961
60	1.000	150	0.272	240	0.612	330	0.940
70	0.988	160	0.148	250	0.697	340	0.934
80	0.942	170	0.112	260	0.785	350	0.944

Additional Azimuths

Degree	V _A
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