

INTERFERENCE ANALYSIS FOR KQDK-CD, DENVER, COLORADO, CHANNEL 16 (RELOCATION OF TRANSMITTER SITE)

tvstudy v2.2.5 (4uoc83)

Database: localhost, Study: kqdk051, Model: Longley-Rice

Study build station data: LMS TV 2023-08-24 #1030

Proposal: KQDK051 D16 DC APP DENVER, CO
File number: kqdk051
Facility ID: 29455
Station data: User record
Record ID: 5205
Country: U.S.

Build options:

Protect LPTV records from Class A

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K15MH-D	D15	LD	LIC	ANTON, CO	BLANK0000117462	162.2 km
No	K15IF-D	D15	LD	LIC	BASALT, CO	BLDTT20100308AAF	164.6
No	KETD	D15	DT	LIC	CASTLE ROCK, CO	BLANK0000120249	6.6
No	K15ED-D	D15	LD	LIC	WAUNITA HOT SPRINGS, CO	BLDTT20140218AGA	169.4
Yes	K16NJ-D	D16	LD	LIC	ANTON, CO	BLANK0000117465	162.2
No	K16CT-D	D16	LD	LIC	CORTEZ, ETC, CO	BLDTT20090522ACK	364.8
No	K16GZ-D	D16	LD	LIC	DURANGO, CO	BLANK0000035518	358.5
No	K16LF-D	D16	LD	LIC	EADS, ETC., CO	BLANK0000001780	245.5
Yes	KPXH-LD	D16	LD	LIC	FORT COLLINS, CO	BLANK0000186648	90.9
No	K16MR-D	D16	LD	LIC	GATEWAY, CO	BLANK0000072778	327.2
No	K16EK-D	D16	LD	LIC	IDALIA, CO	BLDTT20110502ABA	235.4
No	K16DR-D	D16	LD	CP	JACK'S CABIN, CO	BLANK0000206780	176.5
No	K16DR-D	D16	LD	LIC	JACK'S CABIN, CO	BLDTT20100301AAL	176.4
No	K16EJ-D	D16	LD	LIC	PEETZ, CO	BLDTT20101115EOW	213.6
No	K16ET-D	D16	LD	LIC	PLEASANT VALLEY, CO	BLDTT20110613AAS	279.1
No	K16KA-D	D16	LD	LIC	PUEBLO, CO	BLANK0000005043	199.4
Yes	KOAA-TV	D16	LD	LIC	PUEBLO, CO	BLANK0000121583	83.7
No	K16NS-D	D16	LD	LIC	REDSTONE, CO	BLANK0000163792	178.5
No	K16FS-D	D16	LD	LIC	WOODY CREEK, CO	BLDTT20100308AAM	154.0
No	K16NH-D	D16	LD	LIC	WRAY, CO	BLANK0000072276	259.2
No	K16CH-D	D16	LD	LIC	RATON, NM	BLDTL20110725ADQ	346.1
No	KEMS	D16	DT	LIC	VERNAL, UT	BLANK0000204112	340.5
No	K16JI-D	D16	LD	LIC	CASPER, WY	BLANK0000008309	359.4
Yes	KKTQ-LD	D16	LD	LIC	CHEYENNE, WY	BLDTL20110602ACH	159.6
No	K16IO-D	D16	LD	LIC	CHUGWATER, WY	BLDTT20101104AAK	229.5
No	K17KX-D	D17	LD	LIC	ANTON, CO	BLDTT20120110AEM	162.2
No	K17JA-D	D17	LD	LIC	BASALT, CO	BLDTT20091221ABJ	164.6
No	K17OE-D	D17	LD	LIC	COLORADO SPRINGS, CO	BLANK0000083049	114.1
Yes	KPJR-TV	D17	DT	LIC	GREELEY, CO	BLANK0000071955	50.1
Yes	KPJR-TV	D17	DT	CP	GREELEY, CO	BLANK0000158506	50.1
No	K17OK-D	D17	LD	LIC	SNOWMASS VILLAGE, CO	BLANK0000163798	154.4
No	KZCS-LD	N23z	TX	LIC	COLORADO SPRINGS, CO	BLTTL20021218AAJ	114.0

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D16
Mask: Full Service
Latitude: 39 43 44.10 N (NAD83)
Longitude: 105 14 10.00 W
Height AMSL: 2267.1 m
HAAT: 240.0 m
Peak ERP: 15.0 kW
Antenna: DIE-TUL-C2-04/08M-T 138.0 deg
Elev Pattnr: Generic
Elec Tilt: 1.50

48.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.000 kW	427.1 m	6.2 km
45.0	3.06	548.9	58.9
90.0	13.4	555.8	68.3

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135.0	14.4	478.5	66.4
180.0	13.2	90.5	43.3
225.0	4.49	1.9	26.0
270.0	0.001	-12.6	3.4
315.0	0.000	-172.9	3.1

Distance to Canadian border: 1030.4 km

Distance to Mexican border: 890.7 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 74.9 degrees Distance: 591.7 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 358.2 degrees Distance: 47.1 km
ERP: 0.000019 kW Field strength: 25.2 dBu, 0.0 mV/m

No land mobile station failures found

Proposal is not within the Offshore Radio Service protected area

Study cell size: 1.00 km

Profile point spacing: 0.10 km (Higher resolution terrain profile point spacing is requested.)

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

Interference to BLANK0000117465 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K16NJ-D	D16	LD	LIC	ANTON, CO	BLANK0000117465	
Undesireds:	KQDK-CD	D16	DC	BL	DENVER, CO	DTVBL29455	132.2 km
	KQDK051	D16	DC	APP	DENVER, CO	kqdk051	162.2
	K15MH-D	D15	LD	LIC	ANTON, CO	BLANK0000117462	0.0
	KPXH-LD	D16	LD	LIC	FORT COLLINS, CO	BLANK0000186648	175.1
	K16DR-D	D16	LD	CP	JACK'S CABIN, CO	BLANK0000206780	324.2

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	2595.7	771	2594.7	771	2563.5	769	2562.5 769 0.04 0.90
Undesired				Total IX	Unique IX, before		Unique IX, after
KQDK-CD D16 DC BL				0.0	0	0.0	0
KQDK051 D16 DC APP				4.0	0	1.0	0
K15MH-D D15 LD LIC				6.0	2	6.0	2
KPXH-LD D16 LD LIC				25.1	0	25.1	0
						22.1	0

Interference to BLANK0000186648 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KPXH-LD	D16	LD	LIC	FORT COLLINS, CO	BLANK0000186648	
Undesireds:	KQDK-CD	D16	DC	BL	DENVER, CO	DTVBL29455	100.6 km
	KQDK051	D16	DC	APP	DENVER, CO	kqdk051	90.9
	K16DR-D	D16	LD	CP	JACK'S CABIN, CO	BLANK0000206780	246.2
	KKTQ-LD	D16	LD	LIC	CHEYENNE, WY	BLDTL20110602ACH	70.0
	KPJR-TV	D17	DT	LIC	GREELEY, CO	BLANK0000071955	55.6

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	6777.2	528,311	6627.0	527,778	6507.0	526,990	6407.8 516,717 1.52 1.95
Undesired				Total IX	Unique IX, before		Unique IX, after
KQDK-CD D16 DC BL				28.0	105	20.0	105
KQDK051 D16 DC APP				155.3	10,584	119.2	10,378
KKTQ-LD D16 LD LIC				31.0	0	31.0	0
KPJR-TV D17 DT LIC				68.9	683	61.0	683
						32.9	477

INTERFERENCE ANALYSIS FOR KQDK-CD, DENVER, COLORADO, CHANNEL 16 (RELOCATION OF TRANSMITTER SITE)

Interference to BLANK0000121583 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KOAA-TV	D16	LD	LIC	PUEBLO, CO	BLANK0000121583	
Undesireds:	KQDK-CD	D16	DC	BL	DENVER, CO	DTVBL29455	78.4 km
	KQDK051	D16	DC	APP	DENVER, CO	kqdk051	83.7
	K16DR-D	D16	LD	CP	JACK'S CABIN, CO	BLANK0000206780	153.9
	K16KA-D	D16	LD	LIC	PUEBLO, CO	BLANK0000005043	116.0
	K17OE-D	D17	LD	LIC	COLORADO SPRINGS, CO	BLANK0000083049	32.3
	KPJR-TV	D17	DT	LIC	GREELEY, CO	BLANK0000071955	124.6
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
1230.1 197,963		1083.4 114,722		1078.4 113,754		1076.4 113,754	0.19 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
KQDK-CD D16 DC BL		1.0 0		1.0 0			
KQDK051 D16 DC APP		3.0 0				3.0 0	
K16KA-D D16 LD LIC		2.0 0		2.0 0		2.0 0	
K17OE-D D17 LD LIC		2.0 968		2.0 968		2.0 968	

Interference to BLDTL20110602ACH LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KKTQ-LD	D16	LD	LIC	CHEYENNE, WY	BLDTL20110602ACH	
Undesireds:	KQDK-CD	D16	DC	BL	DENVER, CO	DTVBL29455	163.9 km
	KQDK051	D16	DC	APP	DENVER, CO	kqdk051	159.6
	KPXH-LD	D16	LD	LIC	FORT COLLINS, CO	BLANK0000186648	70.0
	KPJR-TV	D17	DT	LIC	GREELEY, CO	BLANK0000071955	116.7
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
1393.4 84,476		1343.5 84,468		1150.4 83,873		1150.4 83,873	0.00 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
KQDK-CD D16 DC BL		3.0 0		0.0 0			
KQDK051 D16 DC APP		2.0 0				0.0 0	
KPXH-LD D16 LD LIC		193.2 595		189.2 595		191.2 595	
KPJR-TV D17 DT LIC		2.0 0		0.0 0		0.0 0	

Interference to BLANK0000071955 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KPJR-TV	D17	DT	LIC	GREELEY, CO	BLANK0000071955	
Undesireds:	KQDK-CD	D16	DC	BL	DENVER, CO	DTVBL29455	47.2 km
	KQDK051	D16	DC	APP	DENVER, CO	kqdk051	50.1
	KLBY	D17	DT	LIC	COLBY, KS	BLANK0000086337	317.8
	KTWO-TV	D17	DT	LIC	CASPER, WY	BLCDT20110315ABB	317.7
	KPXC-TV	D18	DT	LIC	DENVER, CO	BLANK0000071556	0.4
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
29632.4 3,402,358		28039.6 3,377,771		27892.2 3,377,751		27872.4 3,375,516	0.07 0.07
Undesired		Total IX		Unique IX, before		Unique IX, after	
KQDK-CD D16 DC BL		0.0 0		0.0 0			
KQDK051 D16 DC APP		19.8 2,235				19.8 2,235	
KLBY D17 DT LIC		145.3 20		145.3 20		145.3 20	
KTWO-TV D17 DT LIC		1.0 0		1.0 0		1.0 0	
KPXC-TV D18 DT LIC		1.0 0		1.0 0		1.0 0	

Interference to BLANK0000158506 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KPJR-TV	D17	DT	CP	GREELEY, CO	BLANK0000158506	
Undesireds:	KQDK-CD	D16	DC	BL	DENVER, CO	DTVBL29455	47.2 km
	KQDK051	D16	DC	APP	DENVER, CO	kqdk051	50.1
	KLBY	D17	DT	LIC	COLBY, KS	BLANK0000086337	317.8
	KTWO-TV	D17	DT	LIC	CASPER, WY	BLCDT20110315ABB	317.8

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Service area		Terrain-limited		IX-free, before		IX-free, after		Percent	New IX
29625.5	3,402,348	27993.8	3,377,445	27846.5	3,377,425	27821.7	3,375,168	0.09	0.07
Undesired		Total IX		Unique IX, before		Unique IX, after			
KQDK-CD D16 DC BL		0.0		0					
KQDK051 D16 DC APP		24.8		2,257		24.8		2,257	
KLBY D17 DT LIC		146.3		20		146.3		20	
KTWO-TV D17 DT LIC		1.0		0		1.0		0	

Interference to proposal scenario 1
2.49% interference received

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: KQDK051	D16	DC	APP	DENVER, CO	kqdk051	
Undesireds: KETD	D15	DT	LIC	CASTLE ROCK, CO	BLANK0000120249	6.6 km
KPJR-TV	D17	DT	LIC	GREELEY, CO	BLANK0000071955	50.1

Service area		Terrain-limited		IX-free		Percent IX	
5955.9	2,581,460	5594.2	2,554,600	5323.3	2,490,958	4.84	2.49
Undesired		Total IX		Unique IX		Prcnt Unique IX	
KETD D15 DT LIC		178.2		58,058		113.0	
KPJR-TV D17 DT LIC		157.9		25,100		92.7	
						38,542	
						2.02	
						1.66	
						0.22	

Interference to proposal scenario 2
2.49% interference received

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: KQDK051	D16	DC	APP	DENVER, CO	kqdk051	
Undesireds: KETD	D15	DT	LIC	CASTLE ROCK, CO	BLANK0000120249	6.6 km
KPJR-TV	D17	DT	CP	GREELEY, CO	BLANK0000158506	50.1

Service area		Terrain-limited		IX-free		Percent IX	
5955.9	2,581,460	5594.2	2,554,600	5328.3	2,491,105	4.75	2.49
Undesired		Total IX		Unique IX		Prcnt Unique IX	
KETD D15 DT LIC		178.2		58,058		112.0	
KPJR-TV D17 DT CP		153.9		24,953		87.7	
						38,542	
						2.00	
						1.57	
						0.21	
