

TECHNICAL SUMMARY
APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT
FCC FILE NO. 0000156011
LOW POWER DIGITAL STATION K27PC-D
YUMA, ARIZONA
CHANNEL 27 1 KW (DA)

1. Application Purpose: The instant application proposes to modify K27PC-D's outstanding construction permit (File No. 0000156011) by reducing the ERP from 15 kW to 1 kW, changing the directional antenna (DA) system from an ERI model AL8-OC to an IRTE model 1230EH and reducing the antenna height from 544.6 meters AMSL to 496.6 meters AMSL. No other changes are proposed. There will be no change in the overall structure height (ASRN 1007974).

2. Figure 1 demonstrates that there is overlap of 51 dBu, F(50,90) contours for the original CP (BNPDTL-20090825BSU), currently authorized CP (0000156011) and herein proposed operation as required by Section 73.3572(a)(2)(ii) for minor change applications.

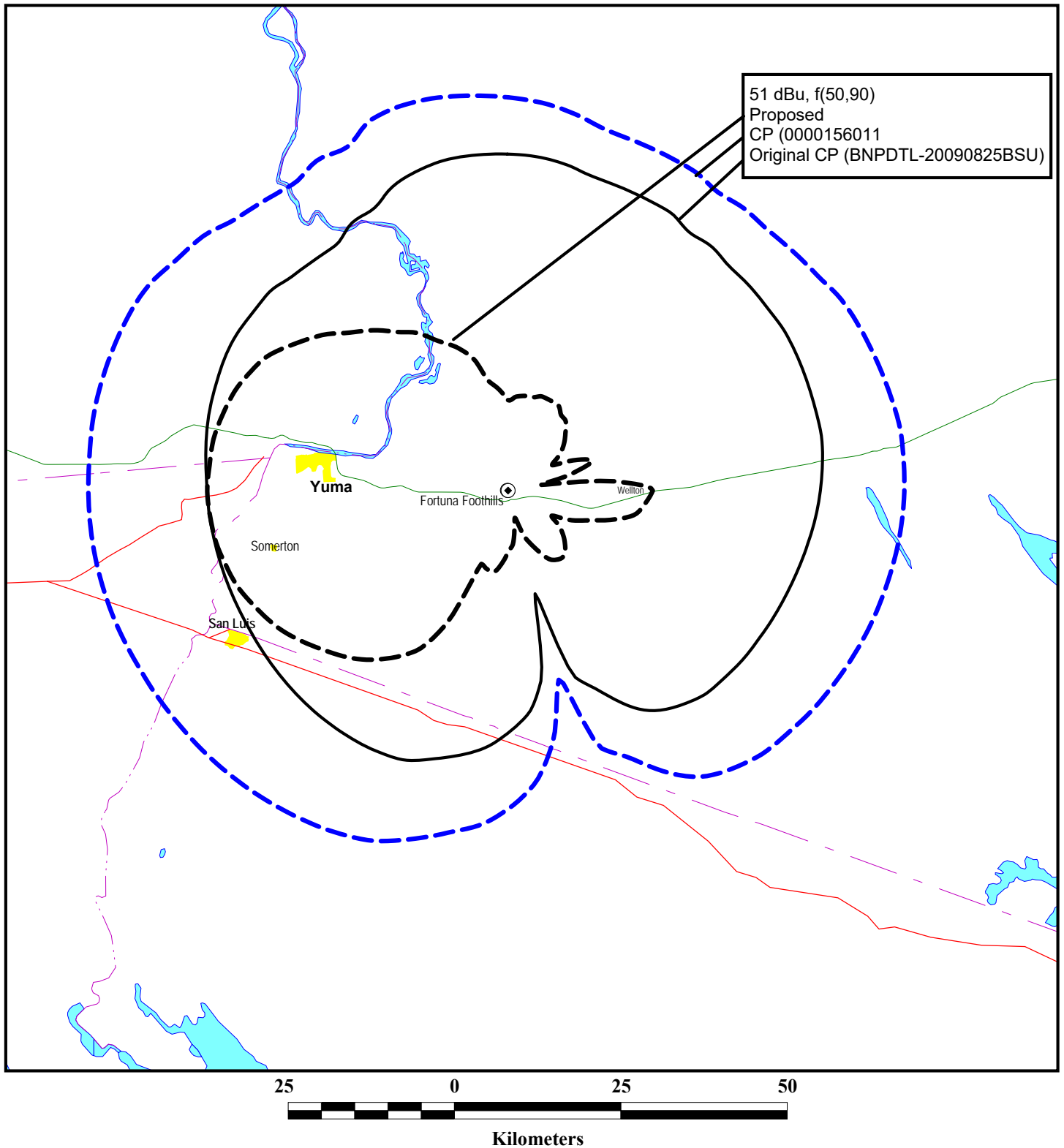
3. Interference Compliance: As indicated in the attached *TVStudy* analyses summaries, K27PC-D's proposed channel 27 operation meets the FCC's interference protection requirements with respect to all protected domestic and international facilities except, as noted, with respect to the cancelled license of LPTV station DK28FM on analog channel 28 at Yuma, Arizona, FCC File No. BLTTL-20001006AAL. As the DK28FM license has been cancelled, protection is not required. A cell size of 1.0 km and a profile resolution of 1.0 km points/km were utilized for each *TVStudy* analysis.

4. RFR Compliance: The proposed facilities were evaluated in terms of potential radiofrequency radiation (RFR) exposure at ground level to workers and the general public. In this case, the site is on a remote mountaintop controlled by the Bureau of Land Management (BLM) and is considered a controlled site. The radiation center for the proposed DTV antenna will be located 5 meters above ground level. The total DTV ERP is 1 kW (horizontal polarization). A greater than expected vertical plane relative field value of 0.15 is presumed for the antenna's downward radiation (-60° to -90° elevation, see attached antenna data which includes the vertical plane relative field pattern). The calculated power density at a point 2 meters above ground level is 83.5 uW/cm² which is 4.5% of the FCC's

recommended limit of 1836.7 uW/cm^2 for channel 27 for a controlled environment. Thus, it is believed that the proposed K27PC-D facility is in full compliance with the FCC's requirements with regard to RF radiation exposure.

Access to the transmitting site will be restricted and appropriately marked with RFR warning signs. Furthermore, as this is a multi-user site, a protocol shall be in effect in the event that workers or other authorized personnel enter the restricted area or climb the supporting structure to ensure that appropriate measures will be taken to assure worker safety with respect to RF energy exposure.

Figure 1



FCC PREDICTED 51 DBU CONTOURS

LPTV STATION K27PC-D
YUMA, ARIZONA
CH 27 1 KW (DA)

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

PROPOSED K27PC-D US TVStudy Analysis

tvstudy v2.2.5 (4uoc83)

Database: localhost, Study: K27PC-D 15 kW - US Only #216, Model: Longley-Rice
Start: 2021.07.23 14:56:11

Study created: 2021.07.23 14:56:10

Study build station data: LMS TV 2021-07-22

Proposal: K27PC-D D27 LD CP YUMA, AZ
File number: K27PC-D 15 kW - US Only
Facility ID: 182419
Station data: User record
Record ID: 190
Country: U.S.

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K19CX-D	N19	TX	LIC	YUMA, AZ	BLTT19941212JC	0.3 km
No	KUTP	D26	DT	LIC	PHOENIX, AZ	BLCDT20130625AAK	224.4
No	KMIR-TV	D26	DT	LIC	PALM SPRINGS, CA	BLANK0000075143	235.8
No	KSWB-TV	D26	DT	LIC	SAN DIEGO, CA	BLANK0000068712	243.2
Yes	K26PN-D	D26	LD	CP	WINTERHAVEN, CA	BNPDTL20100510AAW	48.0
No	K27DA-D	D27	LD	LIC	BIG SANDY VALLEY, AZ	BLDTT20130308AAI	274.2
No	KTVW-CD	D27	DC	LIC	FLAGSTAFF/DONEY PARK, AZ	BLDTA20140421ACI	365.0
No	K27KS-D	D27	LD	LIC	GLOBE/MIAMI, AZ	BLDTT20130312ACC	331.4
No	K27NT-D	D27	LD	LIC	GOLDEN VALLEY, AZ	BLANK0000071725	284.2
No	K27EC-D	D27	LD	LIC	LAKE HAVASU CITY, AZ	BLDTA20110503ACV	214.4
No	K16EO-D	D27	LD	LIC	ORO VALLEY/TUCSON, AZ	BLANK0000067692	316.5
Yes	KASW	D27	DT	LIC	PHOENIX, AZ	BLANK0000106570	224.3
Yes	KASW	D27	DD	CP	PHOENIX, AZ	BLANK0000116045	224.3
No	DDKDFQ-LP	D27z	LD	APP	PRESCOTT, AZ	BLANK0000052540	303.7
No	KYPO-LP	D27	LD	CP	TACNA, AZ	BLANK0000151856	134.8
No	KYPO-LP	N27	TX	LIC	TACNA, AZ	BLTTL20080818AAL	134.8
No	K27NR-D	D27	LD	LIC	TOPOCK, AZ	BLANK0000071723	262.7
No	KSCD-LP	D27-	LD	CP	HEMET, CA	BLANK0000054281	303.4
Yes	KVER-CD	D27	DC	LIC	INDIO, CA	BLANK0000074955	235.7
No	KEDD-LD	D27	LD	CP	LOS ANGELES, CA	BLANK0000054820	417.1
No	K27ON-D	D27	LD	LIC	LUCERNE VALLEY, CA	BLANK0000082020	308.4
No	KPOM-CD	D27	DC	LIC	ONTARIO, CA	BLANK0000080302	354.6
No	KPOM-CD	D27	DC	CP	ONTARIO, CA	BLANK0000136453	385.7
No	KPCD-LP	D27-	LD	CP	San Fernando, CA	BLANK0000054282	326.7
No	K27AE-D	D27	LD	LIC	VICTORVILLE, ETC., CA	BLANK0000143996	347.8
No	K27AE-D	N27	TX	LIC	VICTORVILLE, ETC., CA	BLTT19820105IF	347.8
Yes	DK27DS	D27	LD	APP	YUCCA VALLEY, CA	BDFCDTT20120606AAZ	275.6
No	KPVT-LD	D27	LD	LIC	LAS VEGAS, NV	BLANK0000010689	376.0
No	KGRY-LD	D28	LD	CP	GILA RIVER INDIAN CO, AZ	BLANK0000136687	224.0
No	K28QP-D	D28	LD	CP	SALOME, AZ	BNPDTL20100514AEQ	130.0
No	K28QO-D	D28	LD	CP	SENTINEL, AZ	BNPDTL20100510AAS	107.4
Yes	DK28FM	N28z	TX	APP	YUMA, AZ	BLTTL20001006AAL	0.2**
No	KESQ-TV	D28	DT	LIC	PALM SPRINGS, CA	BLANK0000078362	235.9
No	KESE-LD	N35	TX	LIC	YUMA, AZ	BLTTL20001117AAJ	21.3

****The K28FM License was cancelled 7/19/2021**

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D27
Mask: Full Service
Latitude: 32 40 21.00 N (NAD83)
Longitude: 114 20 10.00 W
Height AMSL: 544.6 m
HAAT: 0.0 m
Peak ERP: 15.0 kW
Antenna: ERI-AL8-OC (ID 89591) 270.0 deg
Elev Pattn: Generic
Elec Tilt: 0.25

50.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	7.22 kW	473.3 m	60.4 km
45.0	6.42	389.8	56.4
90.0	7.54	477.5	60.8
135.0	6.42	388.5	56.4

180.0	7.22	232.8	49.0
225.0	12.1	413.9	61.1
270.0	15.0	456.5	64.4
315.0	12.1	367.4	58.9

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 400 m

Distance to Canadian border: 1814.8 km

**Proposal is within coordination distance of Mexican border
Distance to Mexican border: 33.9 km

Conditions at FCC monitoring station: Douglas AZ
Bearing: 105.2 degrees Distance: 459.7 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 41.9 degrees Distance: 1158.6 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%

Interference to BNPDTL20100510AAW CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance	
	K26PN-D	D26	LD	CP	WINTERHAVEN, CA	BNPDTL20100510AAW		
Undesireds:	K27PC-D	D27	LD	CP	YUMA, AZ	K27PC-D 15 kW - US Onl	48.0 km	
	KMRZ-LD	D26	LD	CP	LOS ANGELES, CA	BLANK0000054819	308.9	
	KMIR-TV	D26	DT	LIC	PALM SPRINGS, CA	BLANK0000075143	192.4	
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
904.3	50,745	868.3	43,880	819.3	30,935	819.3	30,935	0.00 0.00
356.6	26,340	356.6	26,340	342.6	26,318	342.6	26,318	0.00 0.00 (in Mexico)
Undesired				Total IX	Unique IX, before	Unique IX, after		
K27PC-D D27 LD CP				1.0	0	0.0	0	
KMIR-TV D26 DT LIC				49.0	12,945	48.0	12,945	
KMIR-TV D26 DT LIC				14.0	22	14.0	22	(in Mexico)

Interference to BLANK0000106570 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance	
	KASW	D27	DT	LIC	PHOENIX, AZ	BLANK0000106570		
Undesireds:	K27PC-D	D27	LD	CP	YUMA, AZ	K27PC-D 15 kW - US Onl	224.3 km	
	KUTP	D26	DT	LIC	PHOENIX, AZ	BLCDT20130625AAK	0.1	
	KTVW-CD	D27	DC	LIC	FLAGSTAFF/DONEY PARK, AZ	BLDTA20140421ACI	188.7	
	KUAS-TV	D28	DT	LIC	TUCSON, AZ	BLEDT20030115ABS	158.8	
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
35433.1	4,174,222	28755.8	4,158,059	28573.7	4,155,776	28477.0	4,155,776	0.34 0.00
Undesired				Total IX	Unique IX, before	Unique IX, after		
K27PC-D D27 LD CP				98.7	13	96.7	0	
KUTP D26 DT LIC				146.1	2,262	145.1	2,262	
KTVW-CD D27 DC LIC				33.0	21	32.0	8	
KUAS-TV D28 DT LIC				3.0	0	3.0	0	

Interference to BLANK0000116045 CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KASW	D27	DD	CP	PHOENIX, AZ	BLANK0000116045	
Undesireds:	K27PC-D	D27	LD	CP	YUMA, AZ	K27PC-D 15 kW - US Onl	224.3 km
	KUTP	D26	DT	LIC	PHOENIX, AZ	BLCDT20130625AAK	0.1
	KTVW-CD	D27	DC	LIC	FLAGSTAFF/DONEY PARK, AZ	BLDTA20140421ACI	188.7
	KUAS-TV	D28	DT	LIC	TUCSON, AZ	BLEDT20030115ABS	158.8

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
35433.1 4,174,222	28814.7 4,159,877	28632.4 4,159,723	28532.7 4,159,723	0.35 0.00
Undesired	Total IX	Unique IX, before	Unique IX, after	
K27PC-D D27 LD CP	101.7 0		99.7 0	
KUTP D26 DT LIC	141.2 141	141.2 141	139.3 141	
KTVW-CD D27 DC LIC	38.0 13	38.0 13	38.0 13	
KUAS-TV D28 DT LIC	3.0 0	3.0 0	3.0 0	

Interference to BLANK0000074955 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KVER-CD	D27	DC	LIC	INDIO, CA	BLANK0000074955	
Undesireds:	K27PC-D	D27	LD	CP	YUMA, AZ	K27PC-D 15 kW - US Onl	235.7 km
	KMIR-TV	D26	DT	LIC	PALM SPRINGS, CA	BLANK0000075143	0.1
	KPOM-CD	D27	DC	LIC	ONTARIO, CA	BLANK0000080302	122.1
	KEYT-TV	D27	DT	LIC	SANTA BARBARA, CA	BLCDT20061102ABJ	332.3
	KESQ-TV	D28	DT	LIC	PALM SPRINGS, CA	BLANK0000078362	0.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
7452.7 623,334	5255.5 453,763	5170.3 439,720	5167.4 439,720	0.06 0.00
Undesired	Total IX	Unique IX, before	Unique IX, after	
K27PC-D D27 LD CP	5.9 0		3.0 0	
KMIR-TV D26 DT LIC	66.4 4,634	30.7 913	30.7 913	
KPOM-CD D27 DC LIC	13.8 8,099	7.9 6,276	7.9 6,276	
KEYT-TV D27 DT LIC	2.0 0	0.0 0	0.0 0	
KESQ-TV D28 DT LIC	43.6 5,031	7.9 3,133	7.9 3,133	

Interference to BLANK0000074955 LIC scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KVER-CD	D27	DC	LIC	INDIO, CA	BLANK0000074955	
Undesireds:	K27PC-D	D27	LD	CP	YUMA, AZ	K27PC-D 15 kW - US Onl	235.7 km
	KMIR-TV	D26	DT	LIC	PALM SPRINGS, CA	BLANK0000075143	0.1
	KPOM-CD	D27	DC	CP	ONTARIO, CA	BLANK0000136453	154.9
	KEYT-TV	D27	DT	LIC	SANTA BARBARA, CA	BLCDT20061102ABJ	332.3
	KESQ-TV	D28	DT	LIC	PALM SPRINGS, CA	BLANK0000078362	0.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
7452.7 623,334	5255.5 453,763	5163.4 440,520	5160.4 440,520	0.06 0.00
Undesired	Total IX	Unique IX, before	Unique IX, after	
K27PC-D D27 LD CP	5.9 0		3.0 0	
KMIR-TV D26 DT LIC	66.4 4,634	30.7 913	30.7 913	
KPOM-CD D27 DC CP	20.7 7,299	14.8 5,476	14.8 5,476	
KEYT-TV D27 DT LIC	2.0 0	0.0 0	0.0 0	
KESQ-TV D28 DT LIC	43.6 5,031	8.9 3,133	8.9 3,133	

Interference to BDFCDTT20120606AAZ APP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	DK27DS	D27	LD	APP	YUCCA VALLEY, CA	BDFCDTT20120606AAZ	
Undesireds:	K27PC-D	D27	LD	CP	YUMA, AZ	K27PC-D 15 kW - US Onl	275.6 km
	K26KI-D	D26	LD	CP	BANNING, CA	BNPDTL20090825ACQ	21.8
	KMRZ-LD	D26	LD	CP	LOS ANGELES, CA	BLANK0000054819	83.1
	KMIR-TV	D26	DT	LIC	PALM SPRINGS, CA	BLANK0000075143	39.9
	KYPO-LP	D27	LD	CP	TACNA, AZ	BLANK0000151856	291.3
	KVER-CD	D27	DC	LIC	INDIO, CA	BLANK0000074955	40.0
	KPOM-CD	D27	DC	LIC	ONTARIO, CA	BLANK0000080302	83.2
	KPCD-LP	D27-	LD	CP	San fernando, CA	BLANK0000054282	51.5
	K27AE-D	D27	LD	LIC	VICTORVILLE, ETC., CA	BLANK0000143996	77.1
	KESQ-TV	D28	DT	LIC	PALM SPRINGS, CA	BLANK0000078362	39.8

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
1764.0 92,675	1182.0 57,207	929.6 30,178	928.6 30,178	0.11 0.00
Undesired	Total IX	Unique IX, before	Unique IX, after	
K27PC-D D27 LD CP	3.0 0		1.0 0	
K26KI-D D26 LD CP	24.7 66	19.7 66	19.7 66	
KMIR-TV D26 DT LIC	115.4 26,784	2.0 0	2.0 0	
KVER-CD D27 DC LIC	224.9 26,963	110.4 179	110.4 179	

KPOM-CD D27 DC LIC	6.9	0	1.0	0	1.0	0
KPCD-LP D27- LD CP	3.0	0	0.0	0	0.0	0
KESQ-TV D28 DT LIC	75.0	26,628	0.0	0	0.0	0

Interference to BDFCDTT20120606AAZ APP scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance		
	DK27DS	D27	LD	APP	YUCCA VALLEY, CA	BDFCDTT20120606AAZ			
Undesireds:	K27PC-D	D27	LD	CP	YUMA, AZ	K27PC-D 15 kW - US Onl	275.6 km		
	K26KI-D	D26	LD	CP	BANNING, CA	BNPDTL20090825ACQ	21.8		
	KMRZ-LD	D26	LD	CP	LOS ANGELES, CA	BLANK0000054819	83.1		
	KMIR-TV	D26	DT	LIC	PALM SPRINGS, CA	BLANK0000075143	39.9		
	KYPO-LP	D27	LD	CP	TACNA, AZ	BLANK0000151856	291.3		
	KVER-CD	D27	DC	LIC	INDIO, CA	BLANK0000074955	40.0		
	KPOM-CD	D27	DC	CP	ONTARIO, CA	BLANK0000136453	116.5		
	KPCD-LP	D27-	LD	CP	San fernando, CA	BLANK0000054282	51.5		
	K27AE-D	D27	LD	LIC	VICTORVILLE, ETC., CA	BLANK0000143996	77.1		
	KESQ-TV	D28	DT	LIC	PALM SPRINGS, CA	BLANK0000078362	39.8		
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX		
1764.0		92,675		1182.0		57,207	0.11 0.00		
				928.6		30,178			
				927.6		30,178			
Undesired				Total IX	Unique IX, before	Unique IX, after			
K27PC-D D27 LD CP				3.0	0	1.0	0		
K26KI-D D26 LD CP				24.7	66	16.8	0		
KMIR-TV D26 DT LIC				115.4	26,784	2.0	0		
KVER-CD D27 DC LIC				224.9	26,963	110.4	179		
KPOM-CD D27 DC CP				12.8	66	2.0	0		
KPCD-LP D27- LD CP				3.0	0	0.0	0		
KESQ-TV D28 DT LIC				75.0	26,628	0.0	0		

Interference to BLTTTL20001006AAL APP scenario 1

****MX: 13.28% interference caused** **Note: The K28FM license was cancelled on 7/19/2021**

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance		
	DK28FM	N28z	TX	APP	YUMA, AZ	BLTTTL20001006AAL			
Undesireds:	K27PC-D	D27	LD	CP	YUMA, AZ	K27PC-D 15 kW - US Onl	0.2 km		
	K28QO-D	D28	LD	CP	SENTINEL, AZ	BNPDTL20100510AAS	107.5		
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX		
108.2		32,143		90.1		30,278	25.00 13.28		
				88.1		30,278			
				66.1		26,257			
Undesired				Total IX	Unique IX, before	Unique IX, after			
K27PC-D D27 LD CP				24.0	4,021	22.0	4,021		
K28QO-D D28 LD CP				2.0	0	0.0	0		

Interference to proposal scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance		
	K27PC-D	D27	LD	CP	YUMA, AZ	K27PC-D 15 kW - US Onl			
Undesireds:	K26PN-D	D26	LD	CP	WINTERHAVEN, CA	BNPDTL20100510AAW	48.0 km		
	KASW	D27	DT	LIC	PHOENIX, AZ	BLANK0000106570	224.3		
	KYPO-LP	D27	LD	CP	TACNA, AZ	BLANK0000151856	134.8		
	KPOM-CD	D27	DC	LIC	ONTARIO, CA	BLANK0000080302	354.6		
	K27AE-D	D27	LD	LIC	VICTORVILLE, ETC., CA	BLANK0000143996	347.8		
Service area		Terrain-limited		IX-free		Percent IX			
8905.6		198,193		7733.2		198,145	0.72 0.00		
1809.2		203,811		1787.1		203,811	0.06 0.00 (in Mexico)		
				1786.1		203,811			
Undesired				Total IX	Unique IX	Prcnt Unique IX			
K26PN-D D26 LD CP				56.0	0	0.72	0.00		
K26PN-D D26 LD CP				1.0	0	0.06	0.00 (in Mexico)		

PROPOSED K27PC-D US & MEXICO TVStudy Analysis

tvstudy v2.2.5 (4uoc83)

Database: localhost, Study: K27PC-D CP Mod US&Mexico, Model: Longley-Rice
Start: 2021.12.09 13:33:54

Study created: 2021.12.09 13:33:54

Study build station data: LMS TV 2021-12-08

Proposal: K27PC-D D27 LD APP YUMA, AZ
File number: K27PC-D CP Mod US&Mexico
Facility ID: 182419
Station data: User record
Record ID: 365
Country: U.S.

Search options:

Non-U.S. records included

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K19CX-D	N19	TX	LIC	YUMA, AZ	BLTT19941212JC	0.3 km
No	KUTP	D26	DT	LIC	PHOENIX, AZ	BLCDT20130625AAK	224.4
No	KMIR-TV	D26	DT	LIC	PALM SPRINGS, CA	BLANK0000075143	235.8
No	KSWB-TV	D26	DT	LIC	SAN DIEGO, CA	BLANK0000068712	243.2
No	K26PN-D	D26	LD	CP	WINTERHAVEN, CA	BNPDTL20100510AAW	48.0
No	K27DA-D	D27	LD	LIC	BIG SANDY VALLEY, AZ	BLDTT20130308AAI	274.2
No	KTPW-CD	D27	DC	LIC	FLAGSTAFF/DONEY PARK, AZ	BLDTA20140421ACI	365.0
No	K27KS-D	D27	LD	LIC	GLOBE/MIAMI, AZ	BLDTT20130312ACC	331.4
No	K27NT-D	D27	LD	LIC	GOLDEN VALLEY, AZ	BLANK0000071725	284.2
No	K27EC-D	D27	LD	LIC	LAKE HAVASU CITY, AZ	BLDTA20110503ACV	214.4
No	K16EO-D	D27	LD	LIC	ORO VALLEY/TUCSON, AZ	BLANK0000067692	316.5
Yes	KASW	D27	DT	LIC	PHOENIX, AZ	BLANK0000106570	224.3
Yes	KASW	D27	DD	CP	PHOENIX, AZ	BLANK0000116045	224.3
No	DDKDFQ-LP	D27z	LD	APP	PRESCOTT, AZ	BLANK0000052540	303.7
No	KYPO-LP	D27	LD	CP	TACNA, AZ	BLANK0000151856	134.8
No	KYPO-LP	N27	TX	LIC	TACNA, AZ	BLTTL20080818AAL	134.8
No	K27NR-D	D27	LD	LIC	TOPOCK, AZ	BLANK0000071723	262.7
No	KSCD-LP	D27-	LD	APP	HEMET, CA	BLANK0000176844	303.4
No	KSCD-LP	D27-	LD	CP	HEMET, CA	BLANK0000054281	303.4
Yes	KVER-CD	D27	DC	LIC	INDIO, CA	BLANK0000074955	235.7
No	KEDD-LD	D27	LD	CP	LOS ANGELES, CA	BLANK0000054820	417.1
No	K27ON-D	D27	LD	LIC	LUCERNE VALLEY, CA	BLANK0000082020	308.4
No	KPOM-CD	D27	DC	LIC	ONTARIO, CA	BLANK0000080302	354.6
No	KPOM-CD	D27	DC	CP	ONTARIO, CA	BLANK0000136453	385.7
No	KPCD-LP	D27-	LD	APP	San fernando, CA	BLANK0000176777	303.4
No	KPCD-LP	D27-	LD	CP	San fernando, CA	BLANK0000054282	326.7
No	K27AE-D	D27	LD	LIC	VICTORVILLE, ETC., CA	BLANK0000143996	347.8
No	K27AE-D	N27	TX	LIC	VICTORVILLE, ETC., CA	BLTT19820105IF	347.8
No	DK27DS	D27	LD	APP	YUCCA VALLEY, CA	BDFCDTT20120606AAZ	275.6
No	KPVT-LD	D27	LD	LIC	LAS VEGAS, NV	BLANK0000010689	376.0
No	KGRY-LD	D28	LD	LIC	GILA RIVER INDIAN CO, AZ	BLANK0000157663	224.0
No	K28QP-D	D28	LD	CP	SALOME, AZ	BNPDTL20100514AEQ	130.0
No	K28QO-D	D28	LD	CP	SENTINEL, AZ	BNPDTL20100510AAS	107.4
Yes	DK28FM	N28z	TX	APP	YUMA, AZ	BLTTL20001006AAL	0.2
No	KESQ-TV	D28	DT	LIC	PALM SPRINGS, CA	BLANK0000078362	235.9
No	KESE-LD	N35	TX	LIC	YUMA, AZ	BLTTL20001117AAJ	21.3
No	XHEBC	D26	DT	LIC	ENSENADA, BN	BLANKBPFS20160301ABP	233.2
No	XHSFB	D26	DT	LIC	SAN FELIPE, BN	BLANKBPFS20151106AAJ	189.4
No	XHBJ	D27	DT	LIC	TIJUANA, BN	BLANKBPFS20160302ADP	253.9
No	XHAQ	D28	DT	LIC	MEXICALI, BN	BLANKBPFS20050721AFZ	108.0
No	XHJK	D28	DT	LIC	TIJUANA, BN	BLANKBPFS20091104ADT	253.8

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D27
Mask: Full Service
Latitude: 32 40 21.00 N (NAD83)
Longitude: 114 20 10.00 W
Height AMSL: 499.4 m (Adjusted based on actual ground elevation calculation)
HAAT: 0.0 m

Peak ERP: 1.00 kW
Antenna: IRTE-1230EH (ID 19753) 270.0 deg
Elev Pattn: Generic

50.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.002 kW	428.1 m	14.7 km
45.0	0.002	344.6	13.1
90.0	0.014	432.3	22.9
135.0	0.002	343.4	13.1
180.0	0.002	187.7	9.9
225.0	0.240	368.8	36.5
270.0	1.00	411.4	46.6
315.0	0.240	322.2	34.9

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 355 m

Distance to Canadian border: 1814.8 km

**Proposal is within coordination distance of Mexican border
Distance to Mexican border: 33.9 km

Conditions at FCC monitoring station: Douglas AZ
Bearing: 105.2 degrees Distance: 459.7 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 41.9 degrees Distance: 1158.6 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%

Interference to BLANK0000106570 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KASW	D27	DT	LIC	PHOENIX, AZ	BLANK0000106570	
Undesireds:	K27PC-D	D27	LD	APP	YUMA, AZ	K27PC-D CP Mod US&Mexi	224.3 km
	KUTP	D26	DT	LIC	PHOENIX, AZ	BLCDT20130625AAK	0.1
	KTVW-CD	D27	DC	LIC	FLAGSTAFF/DONEY PARK, AZ	BLDTA20140421ACI	188.7
	KUAS-TV	D28	DT	LIC	TUCSON, AZ	BLEDT20030115ABS	158.8
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
35433.1	4,174,222	28755.8	4,158,059	28573.7	4,155,776	28571.7 4,155,776	0.01 0.00
Undesired				Total IX	Unique IX, before	Unique IX, after	
K27PC-D D27 LD APP		2.0		0		2.0 0	
KUTP D26 DT LIC		146.1		2,262	146.1 2,262	146.1 2,262	
KTVW-CD D27 DC LIC		33.0		21	33.0 21	33.0 21	
KUAS-TV D28 DT LIC		3.0		0	3.0 0	3.0 0	

Interference to BLANK0000116045 CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KASW	D27	DD	CP	PHOENIX, AZ	BLANK0000116045	
Undesireds:	K27PC-D	D27	LD	APP	YUMA, AZ	K27PC-D CP Mod US&Mexi	224.3 km
	KUTP	D26	DT	LIC	PHOENIX, AZ	BLCDT20130625AAK	0.1
	KTVW-CD	D27	DC	LIC	FLAGSTAFF/DONEY PARK, AZ	BLDTA20140421ACI	188.7
	KUAS-TV	D28	DT	LIC	TUCSON, AZ	BLEDT20030115ABS	158.8
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
35433.1	4,174,222	28814.7	4,159,877	28632.4	4,159,723	28630.4 4,159,723	0.01 0.00
Undesired				Total IX	Unique IX, before	Unique IX, after	
K27PC-D D27 LD APP		2.0		0		2.0 0	
KUTP D26 DT LIC		141.2		141	141.2 141	141.2 141	
KTVW-CD D27 DC LIC		38.0		13	38.0 13	38.0 13	
KUAS-TV D28 DT LIC		3.0		0	3.0 0	3.0 0	

Interference to BLANK0000074955 LIC scenario 1

Desired:	Call KVER-CD	Chan D27	Svc DC	Status LIC	City, State INDIO, CA	File Number BLANK0000074955	Distance				
Undesireds:	K27PC-D	D27	LD	APP	YUMA, AZ	K27PC-D CP Mod US&Mexi	235.7 km				
	KMIR-TV	D26	DT	LIC	PALM SPRINGS, CA	BLANK0000075143	0.1				
	KPOM-CD	D27	DC	LIC	ONTARIO, CA	BLANK0000080302	122.1				
	KEYT-TV	D27	DT	LIC	SANTA BARBARA, CA	BLCDT20061102ABJ	332.3				
	KESQ-TV	D28	DT	LIC	PALM SPRINGS, CA	BLANK0000078362	0.1				
	XHBJ	D27	DT	LIC	TIJUANA, BN	BLANKBPFS20160302ADP	161.8				
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX			
7452.7	623,334	5255.5	453,763	5170.3	439,720	5169.3	439,720	0.02	0.00		
Undesired				Total IX	Unique IX, before		Unique IX, after				
K27PC-D	D27	LD	APP	3.0	0	1.0		0			
KMIR-TV	D26	DT	LIC	66.4	4,634	30.7	913	30.7	913		
KPOM-CD	D27	DC	LIC	13.8	8,099	6.9	6,276	6.9	6,276		
KEYT-TV	D27	DT	LIC	2.0	0	0.0	0	0.0	0		
KESQ-TV	D28	DT	LIC	43.6	5,031	7.9	3,133	7.9	3,133		
XHBJ	D27	DT	LIC	1.0	0	0.0	0	0.0	0		

Interference to BLANK0000074955 LIC scenario 2

Desired:	Call KVER-CD	Chan D27	Svc DC	Status LIC	City, State INDIO, CA	File Number BLANK0000074955	Distance		
Undesireds:	K27PC-D	D27	LD	APP	YUMA, AZ	K27PC-D CP Mod US&Mexi	235.7 km		
	KMIR-TV	D26	DT	LIC	PALM SPRINGS, CA	BLANK0000075143	0.1		
	KPOM-CD	D27	DC	CP	ONTARIO, CA	BLANK0000136453	154.9		
	KEYT-TV	D27	DT	LIC	SANTA BARBARA, CA	BLCDT20061102ABJ	332.3		
	KESQ-TV	D28	DT	LIC	PALM SPRINGS, CA	BLANK0000078362	0.1		
	XHBJ	D27	DT	LIC	TIJUANA, BN	BLANKBPFS20160302ADP	161.8		
Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
7452.7	623,334	5255.5	453,763	5163.4	440,520	5162.4	440,520	0.02	0.00
Undesired				Total IX		Unique IX, before		Unique IX, after	
K27PC-D	D27	LD	APP	3.0	0		1.0	0	
KMIR-TV	D26	DT	LIC	66.4	4,634	30.7	913	30.7	913
KPOM-CD	D27	DC	CP	20.7	7,299	13.8	5,476	13.8	5,476
KEYT-TV	D27	DT	LIC	2.0	0	0.0	0	0.0	0
KESQ-TV	D28	DT	LIC	43.6	5,031	8.9	3,133	8.9	3,133
XHBJ	D27	DT	LIC	1.0	0	0.0	0	0.0	0

Interference to BLTTL20001006AAL APP scenario 1

Desired:	Call DK28FM	Chan N28z	Svc TX	Status APP	City, State YUMA, AZ	File Number BLTTL20001006AAL	Distance
Undesireds:	K27PC-D	D27	LD	APP	YUMA, AZ	K27PC-D CP Mod US&Mexi	0.2 km
	K28QO-D	D28	LD	CP	SENTINEL, AZ	BNPDTL20100510AAS	107.5
	XHAQ	D28	DT	LIC	MEXICALI, BN	BLANKBPFS20050721AFZ	107.9
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
108.2	32,143	90.1	30,278	44.1	15,817	44.1 15,817	0.00 0.00
Undesired				Total IX	Unique IX, before	Unique IX, after	
K27PC-D	D27 LD APP	1.0	0			0.0 0	
K28QO-D	D28 LD CP	2.0	0	0.0	0	0.0 0	
XHAQ	D28 DT LIC	46.1	14,461	44.1	14,461	44.1 14,461	

Interference to proposal scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K27PC-D	D27	LD	APP	YUMA, AZ	K27PC-D CP Mod US&Mexi	
Undesireds:	K26PN-D	D26	LD	CP	WINTERHAVEN, CA	BNPDTL20100510AAW	48.0 km
	KASW	D27	DT	LIC	PHOENIX, AZ	BLANK0000106570	224.3
	KYPO-LP	D27	LD	CP	TACNA, AZ	BLANK0000151856	134.8
	KSCD-LP	D27-	LD	APP	HEMET, CA	BLANK0000176844	303.4
	KPCD-LP	D27-	LD	APP	San fernando, CA	BLANK0000176777	303.4
Service area		Terrain-limited		IX-free		Percent IX	

2148.1	170,845	2053.1	170,589	2050.1	170,589	0.15	0.00	
89.1	8,903	89.1	8,903	89.1	8,903	0.00	0.00	(in Mexico)
Undesired			Total IX		Unique IX	Prcnt	Unique IX	
K26PN-D D26 LD CP	3.0		0	3.0	0	0.15	0.00	

PUH14000-PUH74000-PUHX4000 UHF HORIZ.POL. 4 DIPOLES PANEL (I230 EH)



W=450 mm / H=1050 mm / D= 197 mm

UHF Band

Operative Frequency
470 - 806 MHz

Input: 1-5/8"EIA
7/8" EIA
7-16 DIN

MAIN FEATURES

Product code: PUH14000 -PUH74000 - PUHX4000

Electrical characteristics

Frequency Range	470 - 806 MHz
Input impedance	50 OHM
Polarization	Horizontal
Gain	11.6 dBd (@ 650 MHz)
VSWR	<1.1
Max input Power PUH14000	5.0 (@650 MHz)
Max input Power PUH74000	2.5 (@650 MHz)
Max input Power PUHX4000	1.0 (@650 MHz)

all metal parts are ground connected

Mechanical characteristics

Input Connector PUH14000	EIA 1-5/8" (swivel)
Input Connector PUH74000	EIA 7/8" (swivel)
Input Connector PUHX4000	DIN 7-16 female
Weight/Mass	157 N (16 Kg 35.2 lbs)
Wind loads (wind=160 Kph)	600N (Front thrust) 250 N (Side thrust)
Max Wind (survival)	200 Kph
Operating temperature	-50°C to +60°C
Pressurization (NOT for 7-16 input version)	100 KPa (1 Atm)
Mounting (Pole Brackets optional)	Tower face/Custom Mast

Materials

Back reflector	Inox Steel
Internal Lines/ Dipoles	Silver Plated Brass/Copper
Radome	Fiberglass
Hardware	Inox Steel AISI304

E/EM Radiation Patterns

