

K12PO-LD DISPLACEMENT APPLICATION FOR CH 3 3 kW DA
TEMECULA, CALIFORNIA
ENGINEERING NARRATIVE AND RF RADIATION ENVIRONMENTAL ANALYSIS
FEBRUARY 2020

The proposed facility qualifies for displacement as described in FCC PN DA 18-124 released February 9, 2018. K12PO has been a licensed and operating analog LPTV facility as authorized in file number BLTTV-20040219ACC. Digital authorization is also authorized in FCC file number BMPDVL-20111116AZX. FCC TVStudy software was utilized to determine the interference levels associated with the K12PO licensed facility and results from the study are pasted in below:

CAUSED INTERFERENCE SUMMARY

**IX check failure to BLANK0000034430 KDOC -TV CP scenario 1, 1.08% interference caused
**IX check failure to BLTVL20110510ABC K12QV-LP LIC scenario 1, 3.04% interference caused

RECEIVED INTERFERENCE

---- Below is IX received by proposal BMPDVL20111116AZX ----

Proposal receives 32.71% interference from scenario 1 **KDOC-TV SEE PAGE 12**
Proposal receives 32.71% interference from scenario 2 **KDOC-TV SEE PAGE 13**

K12PO-LD facility is clearly displaced as received interference is greater than 2% and interference to KDOC-TV CH 12 exceeds 0.5%.

The FCC should cancel or deactivate the existing digital construction permit for CH 12 (BMPDVL-20111116AZX) at such time as the facilities specified herein for CH 3 are granted.

The proposed antenna system consists of a PSI/Aldena slant polarized 2 bay array of 3 element yagi antennas optimized for CH 3 operation, model PSI/ALD AST.03.01.337, elliptically polarized, antenna. The maximum relative field in the elevation pattern across the depression angle range of 40 to 90 degrees is less than 0.30 with a radiation center 26 meters above ground. Utilizing formula 10 OF OET Bulletin No. 65, Edition 97-01, a value F of 0.3 has been used to calculate the power density 2 meters above ground. The maximum power density is 31.3 uw/cm squared calculated for an ERP of 3,000 watts H. polarization and 3,000 watts V. polarization. This value is 15.6% of the Public Exposure MPE per section 1.1310. Based on this analysis it is believed that the proposed facility is in compliance with OET-65 Guidelines.

The applicant will reduce power or cease transmission as required to meet FCC OET-65 Guidelines.

The proposed tower is at an existing site with, building, access road and power.

Below is a copy of the TVStudy interference analysis for CH 3 based on 3 kW ERP with the proposed PSI directional antenna. As can be seen at the conclusion there is no impermissible caused interference, ISIX.

It is believed that the proposed facility provides full protection to other television facilities as well as LM facilities. Due to the extreme congestion in the area between LA and San Diego this is believed to be the only available displacement channel for K12PO.

Study created: 2020.02.25 12:00:04

Study build station data: LMS TV 2020-02-25

Proposal: K12PO D3 LD STA TEMECULA, CA
File number: BLANK0000088770
Facility ID: 41601
Station data: User record
Record ID: 377
Country: U.S.

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KYAN-LD	D2	LD	LIC	LOS ANGELES, CA	BLANK0000090975	42.8 km
No	KHIZ-LD	D2	LD	LIC	LOS ANGELES, CA	BLDTV20140508AAA	111.0
No	K03IL-D	D3	LD	LIC	BULLHEAD CITY, AZ	BLDTV20130308AAK	298.2
Yes	KVTU-LD	D3	LD	LIC	AGOURA HILLS, CA	BLANK0000094153	155.1
No	K03IR-D	D3	LD	CP	BAKERSFIELD, CA	BLANK0000059646	236.8
Yes	KSGA-LD	D3	LD	CP	Los Angeles, CA	BLANK0000052735	110.2
Yes	KVHD-LD	D3	LD	CP	LOS ANGELES, CA	BLANK0000073717	110.2
No	K03EK	N3	TX	LIC	NEWBERRY SPRINGS, CA	BLTTV4849	144.5
Yes	K03IV-D	D3	LD	CP	PALM SPRINGS, CA	BNPDVL20100202AAX	72.7
No	NEW	D3	LD	APP	SAN BERNARDINO, CA	BMJADVL20100520ADI	109.3
No	KAKZ-LD	D4	LD	LIC	CATHEDRAL CITY, CA	BLANK0000010641	72.6
Yes	KWHY-TV	D4	DT	LIC	LOS ANGELES, CA	BLANK0000072085	108.9

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D3
Mask: Full Service
Latitude: 33 35 34.40 N (NAD83)
Longitude: 117 8 53.90 W
Height AMSL: 553.3 m
HAAT: 0.0 m
Peak ERP: 3.00 kW
Antenna: PSI-PSI/ALD AST.03.01.337 175.0 deg
Elev Pattn: Generic

43.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.035 kW	102.8 m	21.1 km
45.0	0.013	82.1	14.8
90.0	0.122	60.3	22.0
135.0	1.76	146.5	51.1
180.0	2.95	168.4	57.4
225.0	1.26	114.2	43.9
270.0	0.038	82.5	19.3
315.0	0.019	47.8	12.6

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 101 m

Distance to Canadian border: 1710.0 km

**Proposal is within coordination distance of Mexican border

Distance to Mexican border: 115.2 km

Conditions at FCC monitoring station: Livermore CA

Bearing: 319.2 degrees Distance: 619.5 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 52.1 degrees Distance: 1280.8 km

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%

---- Below is IX received by proposal BLANK0000088770 ----

Proposal receives 9.45% interference from scenario 1
No IX check failures found.

ISIX

tvstudy v2.2.5 (4uoc83)
Database: 127.0.0.1, Study: BLANK0000088770, Model: Longley-Rice
Start: 2020.02.25 12:00:04

Study created: 2020.02.25 12:00:04

Study build station data: LMS TV 2020-02-25

Proposal: K12PO D3 LD STA TEMECULA, CA
File number: BLANK0000088770
Facility ID: 41601
Station data: User record
Record ID: 377
Country: U.S.

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KYAN-LD	D2	LD	LIC	LOS ANGELES, CA	BLANK0000090975	42.8 km
No	KHIZ-LD	D2	LD	LIC	LOS ANGELES, CA	BLDTV20140508AAA	111.0
No	K03IL-D	D3	LD	LIC	BULLHEAD CITY, AZ	BLDTV20130308AAK	298.2
Yes	KVU-LD	D3	LD	LIC	AGOURA HILLS, CA	BLANK0000094153	155.1
No	K03IR-D	D3	LD	CP	BAKERSFIELD, CA	BLANK0000059646	236.8
Yes	KSGA-LD	D3	LD	CP	Los Angeles, CA	BLANK0000052735	110.2
Yes	KVHD-LD	D3	LD	CP	LOS ANGELES, CA	BLANK0000073717	110.2
No	K03EK	N3	TX	LIC	NEWBERRY SPRINGS, CA	BLTTV4849	144.5
Yes	K03IV-D	D3	LD	CP	PALM SPRINGS, CA	BNPDVL20100202AAX	72.7
No	NEW	D3	LD	APP	SAN BERNARDINO, CA	BMJADVL20100520ADI	109.3
No	KAKZ-LD	D4	LD	LIC	CATHEDRAL CITY, CA	BLANK0000010641	72.6
Yes	KWHY-TV	D4	DT	LIC	LOS ANGELES, CA	BLANK0000072085	108.9

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D3
Mask: Full Service
Latitude: 33 35 34.40 N (NAD83)
Longitude: 117 8 53.90 W
Height AMSL: 553.3 m
HAAT: 0.0 m
Peak ERP: 3.00 kW
Antenna: PSI-PSI/ALD AST.03.01.337 175.0 deg
Elev Pattnr: Generic

43.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.035 kW	102.8 m	21.1 km
45.0	0.013	82.1	14.8
90.0	0.122	60.3	22.0
135.0	1.76	146.5	51.1
180.0	2.95	168.4	57.4
225.0	1.26	114.2	43.9
270.0	0.038	82.5	19.3
315.0	0.019	47.8	12.6

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 101 m

Distance to Canadian border: 1710.0 km

**Proposal is within coordination distance of Mexican border
Distance to Mexican border: 115.2 km

Conditions at FCC monitoring station: Livermore CA
Bearing: 319.2 degrees Distance: 619.5 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 52.1 degrees Distance: 1280.8 km

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 BLANK0000094153 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KVTU-LD	D3	LD	LIC	AGOURA HILLS, CA	BLANK0000094153	
Undesireds:	K12PO	D3	LD	STA	TEMECULA, CA	BLANK0000088770	155.1 km
	KHIZ-LD	D2	LD	LIC	LOS ANGELES, CA	BLDTV20140508AAA	47.9
	KSGA-LD	D3	LD	CP	Los Angeles, CA	BLANK0000052735	48.5
	KVHD-LD	D3	LD	CP	LOS ANGELES, CA	BLANK0000073717	48.5
	KWHY-TV	D4	DT	LIC	LOS ANGELES, CA	BLANK0000072085	49.3

	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
	7328.0	10,427,849	7157.7	10,362,574	6301.3	8,803,575	6301.3	8,803,575	0.00 0.00
Undesired			Total IX		Unique IX, before		Unique IX, after		
K12PO D3 LD STA		0.3	0			0.0	0		
KHIZ-LD D2 LD LIC		42.3	119,312		0.8 1,085	0.8	1,085		
KSGA-LD D3 LD CP		413.8	979,138		0.0 0	0.0	0		
KVHD-LD D3 LD CP		413.8	979,138		0.0 0	0.0	0		
KWHY-TV D4 DT LIC		677.3	1,115,892		427.4 541,891	427.4	541,891		

Interference to BLANK0000052735 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KSGA-LD	D3	LD	CP	Los Angeles, CA	BLANK0000052735	
Undesireds:	K12PO	D3	LD	STA	TEMECULA, CA	BLANK0000088770	110.2 km
	KYAN-LD	D2	LD	LIC	LOS ANGELES, CA	BLANK0000090975	78.1
	KHIZ-LD	D2	LD	LIC	LOS ANGELES, CA	BLDTV20140508AAA	0.8
	KVTU-LD	D3	LD	LIC	AGOURA HILLS, CA	BLANK0000094153	48.5
	KVHD-LD	D3	LD	CP	LOS ANGELES, CA	BLANK0000073717	0.0
	K03IV-D	D3	LD	CP	PALM SPRINGS, CA	BNPDVL20100202AAX	155.6
	KWHY-TV	D4	DT	LIC	LOS ANGELES, CA	BLANK0000072085	1.5

	Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
	5956.8	6,146,268	5547.6	6,053,953	2857.9	1,464,693	2857.9	1,464,693	0.00 0.00
Undesired			Total IX		Unique IX, before		Unique IX, after		
K12PO D3 LD STA		34.5	31,137			0.0	0		
KYAN-LD D2 LD LIC		62.3	72,351		0.0 0	0.0	0		
KHIZ-LD D2 LD LIC		235.1	666,294		0.0 0	0.0	0		
KVTU-LD D3 LD LIC		1317.0	2,971,363		0.0 0	0.0	0		
KVHD-LD D3 LD CP		2689.6	4,589,260		1151.8 1,288,134	1129.1	1,271,026		
K03IV-D D3 LD CP		10.2	12,392		0.0 0	0.0	0		
KWHY-TV D4 DT LIC		824.8	2,321,139		0.0 0	0.0	0		

Interference to BLANK0000073717 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KVHD-LD	D3	LD	CP	LOS ANGELES, CA	BLANK0000073717	
Undesireds:	K12PO	D3	LD	STA	TEMECULA, CA	BLANK0000088770	110.2 km

KYAN-LD	D2	LD	LIC	LOS ANGELES, CA	BLANK0000090975	78.1
KHIZ-LD	D2	LD	LIC	LOS ANGELES, CA	BLDVT20140508AAA	0.8
KVTU-LD	D3	LD	LIC	AGOURA HILLS, CA	BLANK0000094153	48.5
KSGA-LD	D3	LD	CP	Los Angeles, CA	BLANK0000052735	0.0
K03IV-D	D3	LD	CP	PALM SPRINGS, CA	BNPDVL20100202AAX	155.6
KWHY-TV	D4	DT	LIC	LOS ANGELES, CA	BLANK0000072085	1.5

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
5956.8 6,146,268	5547.6 6,053,953	2857.9 1,464,693	2857.9 1,464,693	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
K12PO D3 LD STA	34.5 31,137	0.0 0	0.0 0
KYAN-LD D2 LD LIC	62.3 72,351	0.0 0	0.0 0
KHIZ-LD D2 LD LIC	235.1 666,294	0.0 0	0.0 0
KVTU-LD D3 LD LIC	1317.0 2,971,363	0.0 0	0.0 0
KSGA-LD D3 LD CP	2689.6 4,589,260	1151.8 1,288,134	1129.1 1,271,026
K03IV-D D3 LD CP	10.2 12,392	0.0 0	0.0 0
KWHY-TV D4 DT LIC	824.8 2,321,139	0.0 0	0.0 0

Interference to BNPDVL20100202AAX CP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	K03IV-D	D3	LD	CP	PALM SPRINGS, CA	BNPDVL20100202AAX	
Undesireds:	K12PO	D3	LD	STA	TEMECULA, CA	BLANK0000088770	72.7 km
	KVTU-LD	D3	LD	LIC	AGOURA HILLS, CA	BLANK0000094153	204.1
	KSGA-LD	D3	LD	CP	Los Angeles, CA	BLANK0000052735	155.6
	KVHD-LD	D3	LD	CP	LOS ANGELES, CA	BLANK0000073717	155.6
	NEW	D3	LD	APP	SAN BERNARDINO, CA	BMJADVL20100520ADI	72.9
	KAKZ-LD	D4	LD	LIC	CATHEDRAL CITY, CA	BLANK0000010641	0.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
4584.3 448,528	4284.7 441,480	4268.6 440,521	4262.8 440,517	0.14 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
K12PO D3 LD STA	10.4 4	5.8 4	
KVTU-LD D3 LD LIC	4.1 38	0.2 38	
KSGA-LD D3 LD CP	14.9 921	0.0 0	
KVHD-LD D3 LD CP	14.9 921	0.0 0	
NEW D3 LD APP	0.3 0	0.3 0	
KAKZ-LD D4 LD LIC	0.2 0	0.2 0	

Interference to BLANK0000072085 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KWHY-TV	D4	DT	LIC	LOS ANGELES, CA	BLANK0000072085	
Undesireds:	K12PO	D3	LD	STA	TEMECULA, CA	BLANK0000088770	108.9 km

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
64246.0 18,691,630	62039.2 18,578,590	62039.2 18,578,590	61998.4 18,546,252	0.07 0.17

Undesired	Total IX	Unique IX, before	Unique IX, after
K12PO D3 LD STA	40.8 32,338	40.8 32,338	

Interference to proposal scenario 1
9.45% interference received

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	K12PO	D3	LD	STA	TEMECULA, CA	BLANK0000088770	
Undesireds:	KVTU-LD	D3	LD	LIC	AGOURA HILLS, CA	BLANK0000094153	155.1 km
	KSGA-LD	D3	LD	CP	Los Angeles, CA	BLANK0000052735	110.2
	KVHD-LD	D3	LD	CP	LOS ANGELES, CA	BLANK0000073717	110.2
	KWHY-TV	D4	DT	LIC	LOS ANGELES, CA	BLANK0000072085	108.9

Service area	Terrain-limited	IX-free	Percent IX
3844.3 1,122,144	3541.3 966,157	3238.1 874,843	8.56 9.45

Undesired	Total IX	Unique IX	Prcnt Unique IX
KVTU-LD D3 LD LIC	112.0 50,118	27.4 18,534	0.77 1.92
KSGA-LD D3 LD CP	275.8 72,780	0.0 0	0.00 0.00
KVHD-LD D3 LD CP	275.8 72,780	0.0 0	0.00 0.00
KWHY-TV D4 DT LIC	0.7 562	0.0 0	0.00 0.00

The foregoing was prepared on behalf of **Channel 51 of San Diego, Inc.** by Clarence M. Beverage of *Communications Technologies, Inc.*, Marlton, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.

A handwritten signature in black ink, appearing to read "Clarence M. Beverage".

Clarence M. Beverage
for Communications Technologies, Inc.
Marlton, New Jersey

February 26, 2020