

# **EXHIBIT 12 – Channel Study & Waiver Requests** **Board of Regents of the Nevada System of Higher Education** **Application to make changes in FM Translator K220DB, Susanville, CA**

## **Waiver Request of Section 74.1204, and showing of Compliance**

The 40 dBu interfering contour of FM Translator K220DB, Susanville, CA encroaches on the protected 60 dBu contour of newly constructed KQNY, Quincy, CA. Applicant proposes to adjust the ERP & antenna orientation of this translator (in addition to correcting antenna coordinates) to eliminate the contour overlap.

### **With respect to FM Translator K210BC**

The proposed FM translator is located within the protected 60 dBu F(50,50) contour of 2<sup>nd</sup> adjacent channel FM Translator K210BC (CP for Channel 218), Johnstonville, CA (see Overlap Study, **Figure 1**).

The predicted F(50,50) field strength of Translator K210BC at the proposed translator site is 120.0 dBu (free space equation). Using the Undesired to Desired method for calculating proposed interference, the interfering contour of the proposed translator with respect to K220DB is 160.0 dBu (120.0 + 40) (free space contour method employed). This interfering signal would, in the worst case at the maximum radial, extend 0.5 meters from the transmitting antenna. This signal would not reach the ground. The proposed translator is located at a remote mountaintop communications site. All structures in the area house communications equipment only, and have no regular human occupancy.

Since no population inhabits the interference area, the Applicant respectfully requests a waiver of the FM translator contour overlap requirements with respect to 2<sup>nd</sup> adjacent FM translator K210BC, Johnstonville, CA.

### **With respect to KQNY, Quincy, CA**

The close contour relationship with co-channel KQNY, Quincy, CA (see **Figure 1**) is explored using an expanded contour relationship map in **Figure 2** below. The absence of any contour overlap is demonstrated.

### **Overlap Study**

K220DB Minor Modification											
Board Of Regents Of The Nevada System Of Higher Education											
REFERENCE		CH# 220D - 91.9 MHz, Pwr= 0.06 kw DA, HAAT= 672.5 M, COR= 2049 M								DISPLAY DATES	
40 26 47.4 N.		Average Protected F(50-50)= 24.1 km								DATA 03-15-13	
120 21 26.0 W.		Standard Directional								SEARCH 03-18-13	
CH	CALL	TYPE	ANT	AZI.	DIST	LAT.	Pwr(kw)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG.	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)	
220D	K220DB	LIC	DHN	25.7	0.05	40 26 49.0	0.092	70.4	21.4	-80.8*	-63.5*
Susanville, Etc.		CA	CA	205.7	BLFT19920721TB	120 21 25.0	706	2078	Board Of Regents Of The Ne		
Translator for KUNR, Reno, NV											
218D	K210BC	CP	DV	25.7	0.05	40 26 49.0	0.098	0.6	25.7	-10.9*	-25.8*
Johnstonville, Etc.		CA	CA	205.7	BPFT20111110AJZ	120 21 25.0		2069	Western Inspirational Broa		
220A	KQNY	LIC	DCX	221.7	75.57	39 56 15.0	2.700	51.2	12.9	3.9	1.3
Quincy		CA	CA	41.3	BLED20100727ACJ	120 56 49.0	-342	1057	Plumas Community Radio		
221C3	KWFP	LIC	NCX	153.6	106.90	39 35 03.0	8.900	57.2	38.3	24.3	28.5
Sparks		NV	NV	333.9	BLH20041102ABT	119 48 06.0	153	1713	wilks License Company-reno		

CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap	*OUT* in km)
06NT Dayton	K06JK	LI	DHN NV	151.4 331.9	157.72 BLTTV19780822IC	39 11 52.0 119 28 50.0	0.047 1130	0.2 2548	91.5 Lyon County	130.5R Public Works	27.2M
220D Burney	K220EB	LIC	DVN CA	292.3 111.3	128.32 BLFT19940729TB	40 52 30.0 121 46 12.0	0.010 468	39.8 1646	11.6 The Research Foundation	66.7	46.4
220A Colfax	NEW	CP	DVX CA	201.4 21.0	143.10 BNPED20071022AIX	39 14 47.0 120 57 48.0	0.480 347	63.7 1206	21.1 Immaculate	57.3 Conception	52.1 Apos
217C Carson City	KNIS	LIC	CN NV	157.1 337.5	143.18 BLED19891016KA	39 15 30.0 119 42 36.0	67.000 660	12.3 2311	89.0 Western	105.2 Inspirational	53.5 Broa
06+T Redding	KNNN-LP	LI	D N CA	277.9 96.5	184.17 BLTVL20060918ACG	40 39 15.0 122 31 13.0	1.500 797	0.2 1001	91.5 Venture	130.5R Technologies	53.7M Group
06 D Redding	KNNN-LD	CPM	D N CA	277.9 96.5	184.22 BMPDVL20110826ABQ	40 39 14.0 122 31 15.0	3.000 810	2.5 1015	36.2 Venture	130.5R Technologies	53.7M Group
06ZT Sacramento	KEFM-LP	LI	D N CA	222.6 41.7	186.03 BLTVL20120410AEA	39 12 21.1 121 49 09.7	3.000 661	0.2 687	91.5 Venture	130.5R Technologies	55.5M Group
06 D Sacramento	KEFM-LD	CP	D N CA	222.6 41.7	186.06 BDCCDVL20110708ABD	39 12 20.0 121 49 10.0	3.000 668	0.2 694	91.5 Venture	130.5R Technologies	55.6M Group
219B Chico	KCHO	LIC	CN CA	245.2 64.3	127.30 BLED19860514KD	39 57 30.0 121 42 48.0	7.700 372	30.6 1119	20.4 The Research Foundation	72.8	56.6
06NT Yerington	K06KC	LI	DHN NV	149.2 329.9	188.12 BLTTV19800930IE	38 59 15.0 119 14 35.0	0.027 614	0.2 1948	91.5 Lyon County	130.5R Public Works	57.6M
219D Verdi	K219AR	LIC	DCN NV	159.6 339.9	103.01 BLFT19861229TF	39 34 38.0 119 56 19.0	0.046 698	2.7 2434	1.4 Board Of Regents Of The Ne	74.5	59.5
219C2 Jessup	NEW	CP	CX NV	115.6 296.5	135.82 BNPED20071018ABI	39 54 35.0 118 55 15.0	5.000 260	52.4 1643	35.0 Centro Cristiano	62.7 Vida	73.8 Abun
06 D Reno	1330491	AP	N NV	153.4 333.8	107.05 BNPEDVL20090825AOE	39 35 03.0 119 47 52.0	0.300 367	2.5 1725	36.2 Alma	38.7R Corporation	68.4M
218A Gerlach	KFBR	LIC	CX NV	74.6 255.2	87.54 BLED20110121AAO	40 39 06.7 119 21 24.7	0.600	1.6 1217	8.9 Friends Of	74.7 Black Rock	78.5 High
220A Mccloud	KLDD	LIC	CX CA	303.5 122.3	183.94 BLED20081009AEO	41 20 43.0 122 11 42.0	0.035 724	85.1 2434	27.1 Oregon St	77.4 Board Of	91.9 Higher
06NT Lewiston	K06EX	LI	DHN CA	278.2 96.6	210.75 BLTTV1166	40 41 27.0 122 49 55.0	0.007 386	0.2 986	91.5 Lewiston	130.5R Translator	80.3M Compan
220A Mccloud	KLDD	CP	CX CA	298.4 117.1	185.32 BPED20110527AKT	41 13 19.0 122 18 27.0	0.035 470	70.1 1702	21.6 Oregon St	93.4 Board Of	97.5 Higher
221A Cottonwood	AL3889	VAC	CA	268.7 87.4	163.63 RM11367	40 23 45.0 122 17 22.0	6.000 100	46.0 261	29.7 Michael R	93.7 Birdsill	97.2
06 D Chiloquin	K06NS-D	LI	N OR	330.4 149.5	233.21 BLDTV20090126ABJ	42 15 45.0 121 45 22.0	0.193 406	0.2 1669	91.5 California	130.5R Oregon	102.7M Broadcas
220C Battle Mountain	DKCWW.	CP	HX NV	85.2 267.6	310.60 BPED20110425ACI	40 37 15.0 116 41 18.0	45.000 693	192.1 2277	90.9 Western	104.4 Inspirational	175.9 Broa
06NT Fort Jones, Etc.	K06KA	LI	DHN CA	298.7 117.0	242.77 BLTTV19800528ID	41 28 00.0 122 54 50.0	0.021 782	0.2 1631	91.5 KtvI	130.5R Licensee, Llc	112.3M
06 T Fort Jones, Etc.	K06KA	CP	D N CA	298.7 117.0	242.77 BDFCDTV20111026AEG	41 28 00.0 122 54 50.0	0.021 283	0.2 1131	91.5 KtvI	130.5R Licensee, Llc	112.3M
223C Klamath Falls	KLAD-FM	LIC	NCX OR	330.3 149.4	212.23 BLH20111103AIE	42 05 50.0 121 37 59.0	63.000 653	12.7 1988	91.5 Basin	182.4 Mediactive, Llc	120.8
06NT Orovida	K06CT	LI	DHN NV	58.0 239.7	258.38 BLTTV19930719IF	41 38 59.0 117 43 14.0	0.114 555	0.2 1865	91.5 Quinn River	130.5R Tv Maintenance	127.9M
06-T Gabbs	K06NZ	LI	D N NV	129.0 310.6	274.34 BLTTV20040204ACX	38 52 02.0 117 53 39.0	0.057 341	0.2 1722	91.5 City Of	130.5R Gabbs	143.8M

CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
06NT Hopland	K06FA	LI	DHN CA	235.3 53.6	289.02 BLTTV4184	38 56 06.0 123 06 22.0	0.013 335	0.2 512	91.5 Sanel Valley Television As	130.5R	158.5M
06 D Healdsburg	1331038	AP	D N CA	232.6 50.9	293.66 BNPDVL20090825CBK	38 48 34.0 123 02 56.0	0.300 368	2.5 457	36.2 One Ministries, Inc.	130.5R	163.2M
06 D Ceres	1330972	AP	D N CA	187.9 7.6	331.63 BNPDVL20090825BYV	37 29 26.8 120 52 26.8	0.300 79	2.5 95	36.2 One Ministries, Inc.	130.5R	201.1M
06 D Manhattan	K06KQ-D	LI	D N NV	125.9 308.0	353.20 BLDTV20110531AQP	38 32 16.0 117 03 57.0	0.020 378	2.5 2235	36.2 County Of Nye	130.5R	222.7M
06 D Elko	K06MK-D	LI	D N NV	82.4 265.5	395.00 BLDTV20111123AAA	40 49 16.0 115 42 04.0	0.100 428	2.5 2001	36.2 Elko Television District	130.5R	264.5M
06 D Ryndon	K06NY-D	LI	D Y NV	80.3 263.3	403.93 BLDTV20111219ABC	40 57 54.0 115 36 47.0	0.062 24	0.2 1586	91.5 Elko Television District	130.5R	273.4M
06 D Bend	K06PA-D	CP	D N OR	353.2 172.8	419.79 BDFCDVL20090608ABF	44 11 40.0 120 58 36.0	0.300 663	0.2 1601	91.5 Kenneth E. Lewetang	130.5R	289.3M

Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM  
In & Out distances between contours are shown at closest points. Reference Zone= West Zone, Co to 3rd adjacent.  
All separation margins (if shown) include rounding  
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)  
"\*"affixed to 'IN' or 'OUT' values = site inside protected contour.

Figure 1

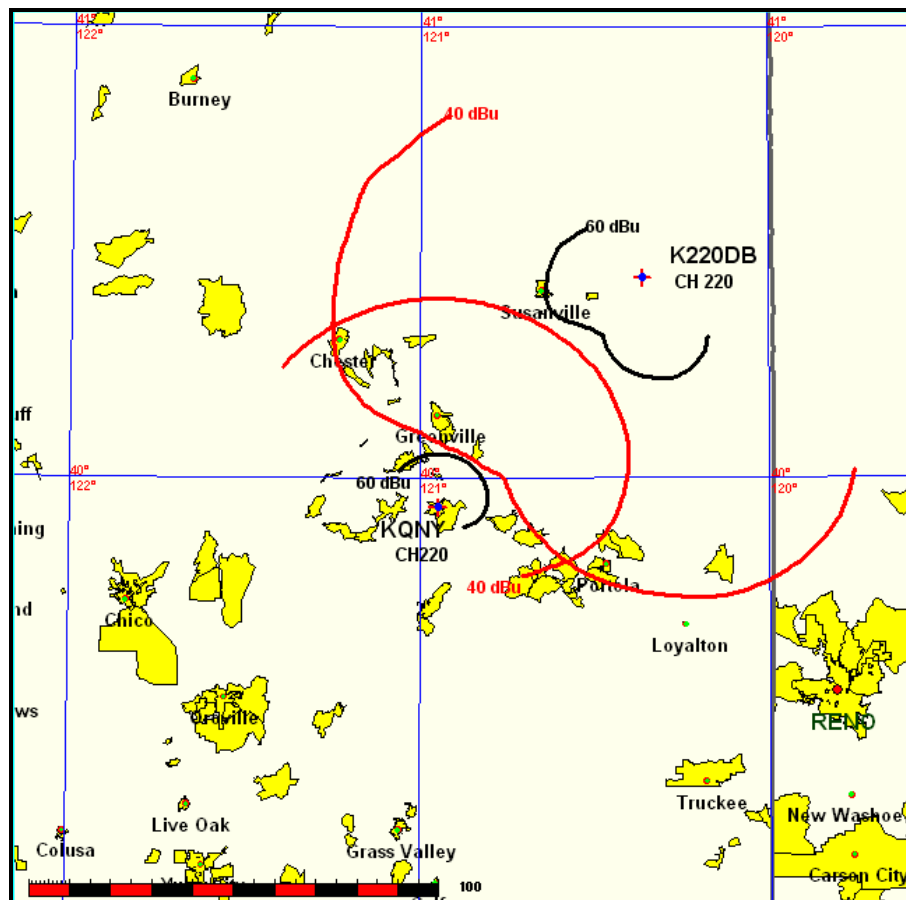


Figure 2

### Waiver request of Section 74.1235(b)(2) and “grandfathering” of power

With this application, the Applicant seeks waiver of the power limitations as set forth in CFR 74.1235(b)(2), and “grandfathering” of the higher than normal power allowed for this HAAT. This will allow the FM translator to maintain the “*status quo*” coverage over most of its service area, while achieving protection of full service co-channel KQNY, Quincy. Figure 3 below reveals that the 60 dBu service contour of the proposed facility is contained within, or is contingent with, its current 60 dBu contour.

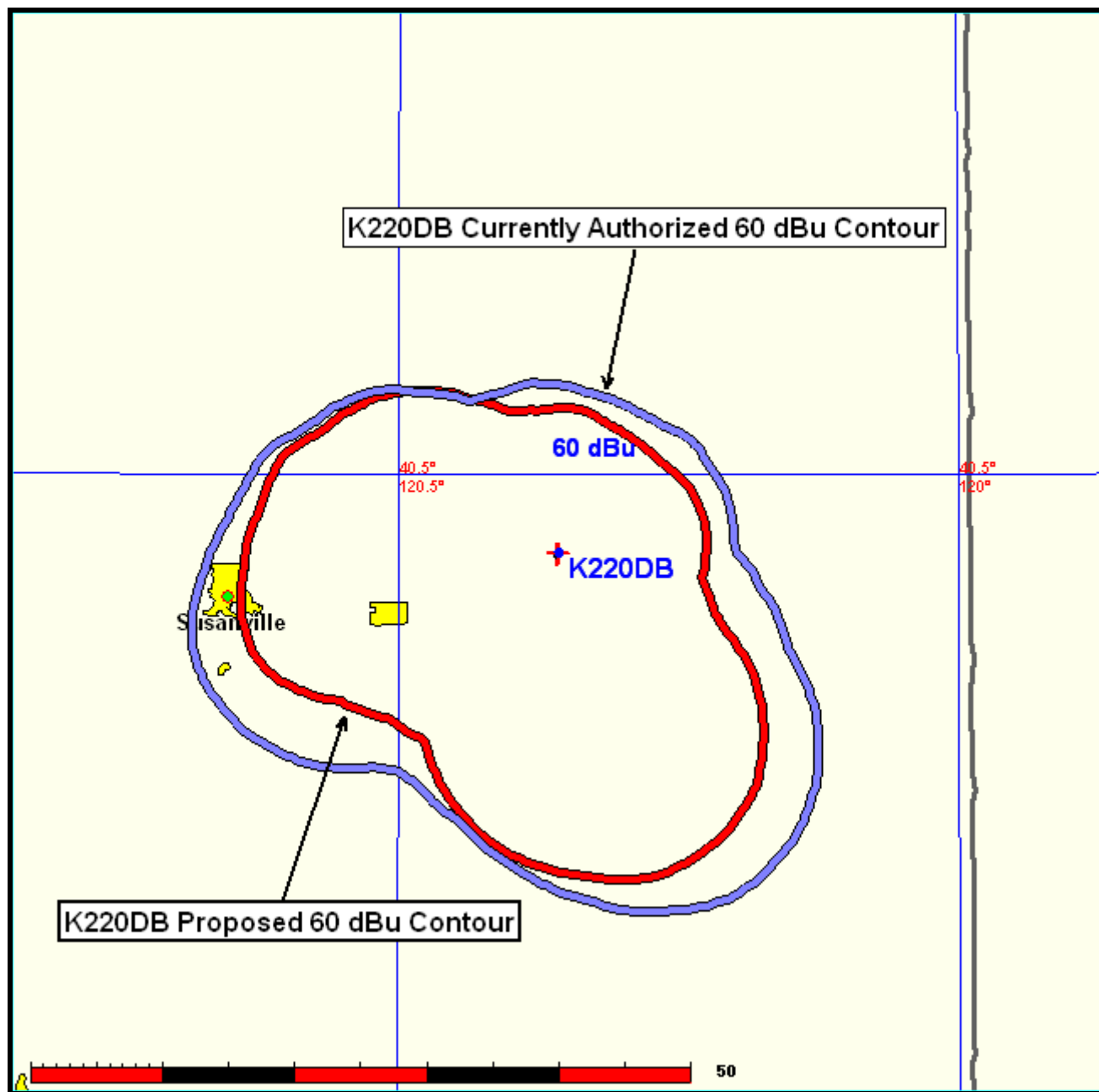


Figure 3