Worldwide Installations
Society of Broadcast Engineers Certified Member
National Association of Radio and Telecommunications Engineers No. 11-00619

Broadcast Engineering Services of Bonny Doon, Inc.
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Donald E. Mussell Jr. NCE-CBT
Consulting Engineer

107.3 dbu Overlap Statement
New Translator for KPFA
BNPFT -20030313AAO
Santa Cruz, California

The location, antenna and power level combination proposed in this application does not result in any prohibited overlap to any existing or proposed stations, with the exception of third adjacent channel KWAV Monterey, California (BMLH-20041028AIK). For the reasons set forth below, the overlap with KWAV complies with 74.1204(d) because the translator's 107.3 dbu contour will not overlap any populated area. The closest permanent residence is just over 77 meters distant from the proposed antenna location, as calculated using the Google Earth on-line mapping tool. The interfering overlap contour extends only 68 meters.

Using the desired to undesired criteria for interference calculations set forth in Section 74.1204 of the FCC's Rules, one could assume the signal strength of KWAV-FM at the translator site is 54 dBu: 54dBu + 40 dBu = 94 dBu. However, based upon standard FCC 50/50 calculations, the signal of KWAV-FM at the transmitter site is actually 67.3 dBu. The resulting interference contour generated would then be 107.3 dbu. (67.3 dBu + 40 dBu = 107.3 dBu).

The 107.3 dBu contour extends 68 meters using the freespace equation. The distance to the closest dormitory is just over 77 meters. Therefore the calculated signal cannot reach any population residing in the dormitory buildings.

dBu = 106.92 + 10log(kW) – 20log(km)

107.3 = 106.92 + 10*log(.005) - 20 * log(km)
107.3 = (106.92 + -23.01) - 20 log(km)
107.3 = 83.91 - 20 log(km)
107.3 - 83.91 = -20 log(km)
(107.3 - 83.91)/-20 = log(km)
-1.1695 = log(km)
antilog (-1.1695) = km
0.068 = km. or 68 meters

This calculation agrees with the FCC TVFMINT FORTRAN program, which gives a measurement of 0.06781 km.

An extensive search of this location included an on-site survey, personally conducted by this consulting engineer. The on-site survey revealed no structures or population inside the proposed 107.3 dbu contour area. This site is located in the

woodland above the UCSC campus, and was originally surveyed and designated by this consulting engineer for use by the campus radio station, and was chosen because of its geographic isolation and line of sight to the city of license.

A Google aerial photograph of the area shows the site locations in question. The Google map ruler tool calculates the distance from the proposed site (directly adjacent to the existing tower structure shown in the Google Aerial photograph) to the nearest structure as 77.34 meters. There are no other occupied structures that are closer to the proposed antenna site.

Based upon these findings, along with personal observations, the applicant submits that the area inside the overlap area is an unpopulated woodland forest.

Respectfully submitted,

Donald E. Mussell Jr. NCE-CBT
October 1, 2008

Don Mussell NCE-CBT, Consulting Engineer
Broadcast Engineering Services of Bonny Doon, Inc.

Pacifica Foundation, Inc.
1250398 Modified to 5 watts

REFERENCE CH# 248D - 97.5 MHz, Pwr= 0.005 kW, HAAT= 126.1 M, COR= 260 M DISPLAY DATES
37 00 10.0 N. Average Protected F(50-50)= 5.49 km DATA 08-21-08
122 03 04.0 W. SEARCH 09-02-08

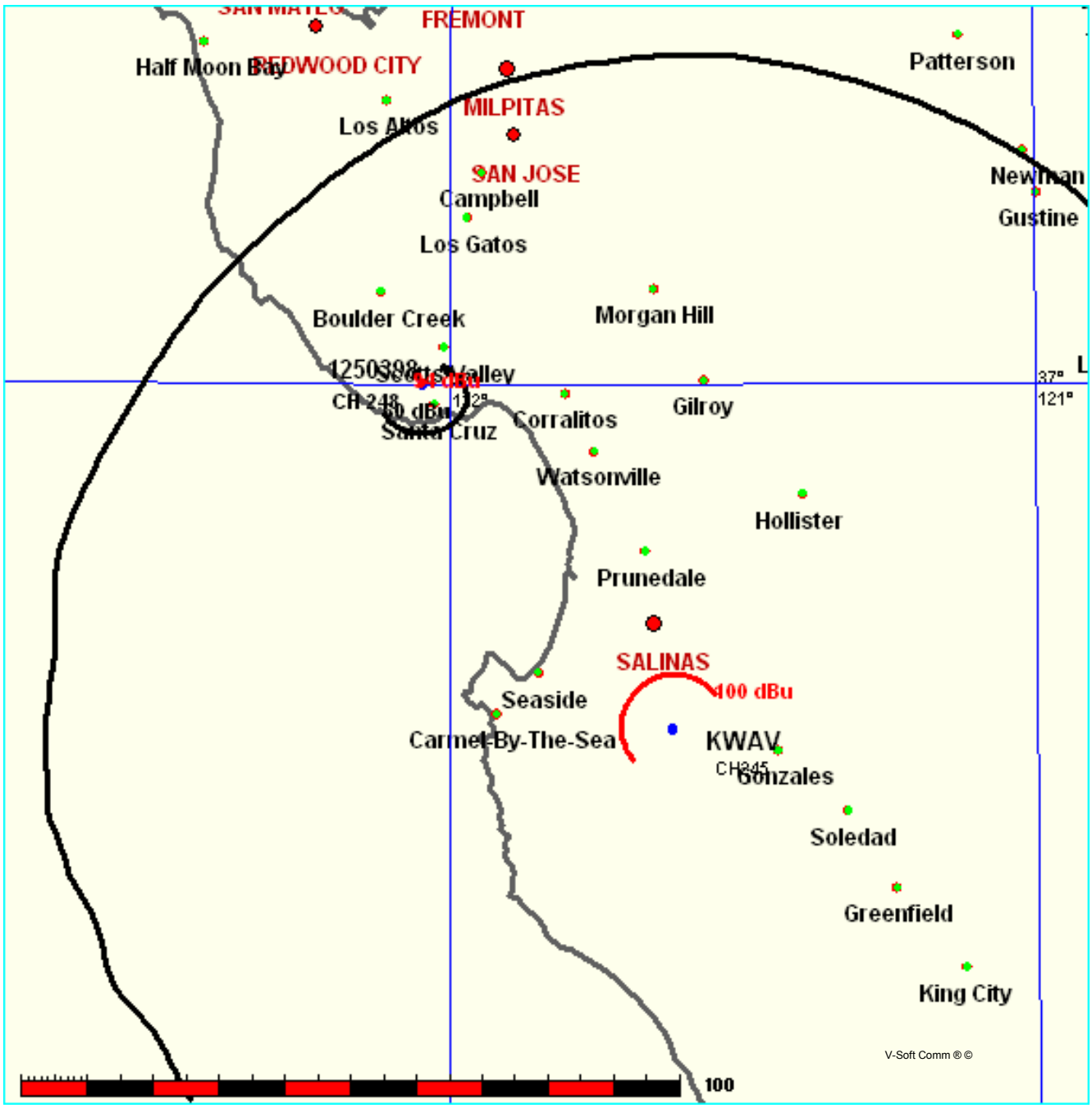
CH CITY	CALL STATE	TYPE	ANT <--	AZI	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
248D Santa Cruz	1250398 CA	APP	_C_	0.0 0.0	0.00 BNPFT20080606AAQ	37 00 10.0 122 03 04.0	0.010	13.6 260	4.3 Pacifica Foundation, Inc.	-17.26*<	-15.90*<
245B Monterey	KWAV CA	LIC	_CX	143.5 323.7	64.62 BMLH20041028AIK	36 32 05.0 121 37 14.0	18.000 747	8.1 1071	97.2 Buckley Broadcasting Of Mo	48.81	-32.91*<
248D Santa Cruz	634920 CA	APP	_C_	0.0 0.0	0.00 BNPFT20030313AAO	37 00 10.0 122 03 04.0	0.005	11.6 260	3.6 Pacifica Foundation, Inc.	-15.21*<	-15.21*<
247B San Francisco Grandfathered at 82KW @ 309M Haat	KLLC CA	LIC	_CN	337.5 157.2	102.08 BLH19950321KB	37 51 03.0 122 29 51.0	82.000 309	101.2 368	83.5 Cbs Radio East Inc.	-3.70<	9.37
249A Los Altos	KFFG CA	LIC	_CX	353.5 173.5	34.04 BLH20070810AAY	37 18 27.0 122 05 41.0	3.300 136	20.0 405	13.5 Kffg Lico, Inc.	10.32	15.32
250A Salinas Section 73.215 applicant	KYZZ CA	LIC	NCN	127.9 308.3	59.60 BLH19970527KB	36 40 20.0 121 31 28.0	2.900 146	3.2 422	42.4 Buckley Broadcasting Corpo	48.67	17.05
251B San Francisco	KISQ CA	LIC	_CX	337.5 157.2	102.10 BLH20040315ACA	37 51 04.0 122 29 50.0	75.000 310	9.2 369	82.7 Amfm Broadcasting Licenses	88.25	19.08
248B Merced	KABX-FM CA	LIC	DC_	73.2 254.3	176.28 BLH20000103ABD	37 26 44.0 120 08 37.0	8.800 354	147.5 748	79.2 Mapleton License Of Merced	24.31	76.11
247D San Ramon, Etc.	KLLC-FM1 CA	LIC	_HN	3.5 183.6	81.79 BLFTB19851118TA	37 44 18.0 121 59 38.0	0.040	21.6 564	14.4 Cbs Radio East Inc.	57.53	63.61
247D Pleasanton	KLLC-2 CA	APP	DV_	14.5 194.6	75.49 BNPFTB20080724ABF	37 39 40.0 121 50 12.0	10.000	2.5 179	1.8 Cbs Radio East Inc.	70.28	69.94
245D San Francisco	640185 CA	APP	_C_	336.1 155.9	83.32 BNPFT20030317CMU	37 41 17.0 122 26 07.0	0.009	0.2 435	11.1 Broadcast Towers, Inc.	78.62	72.04
251D Pleasanton	KISQ-FM2 CA	LIC	DHN	14.5 194.6	75.49 BLFTB19890622TA	37 39 40.0 121 50 12.0	10.000 -52	0.1 179	1.8 Amfm Broadcasting Licenses	72.74	73.52

Terrain database is NGDC 30 SEC Distance + R = 73.215 or FCC Spacings in KM, Distance + M = Margin in KM
Contour distances are on direct line to and from reference station. Reference zone = 1A. With 3rd Adj Channels.
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.
"<" = Contour Overlap

Pacifica Foundation, Inc.
1250398-KWAV

FMCommander Single Allocation Study
09-02-2008

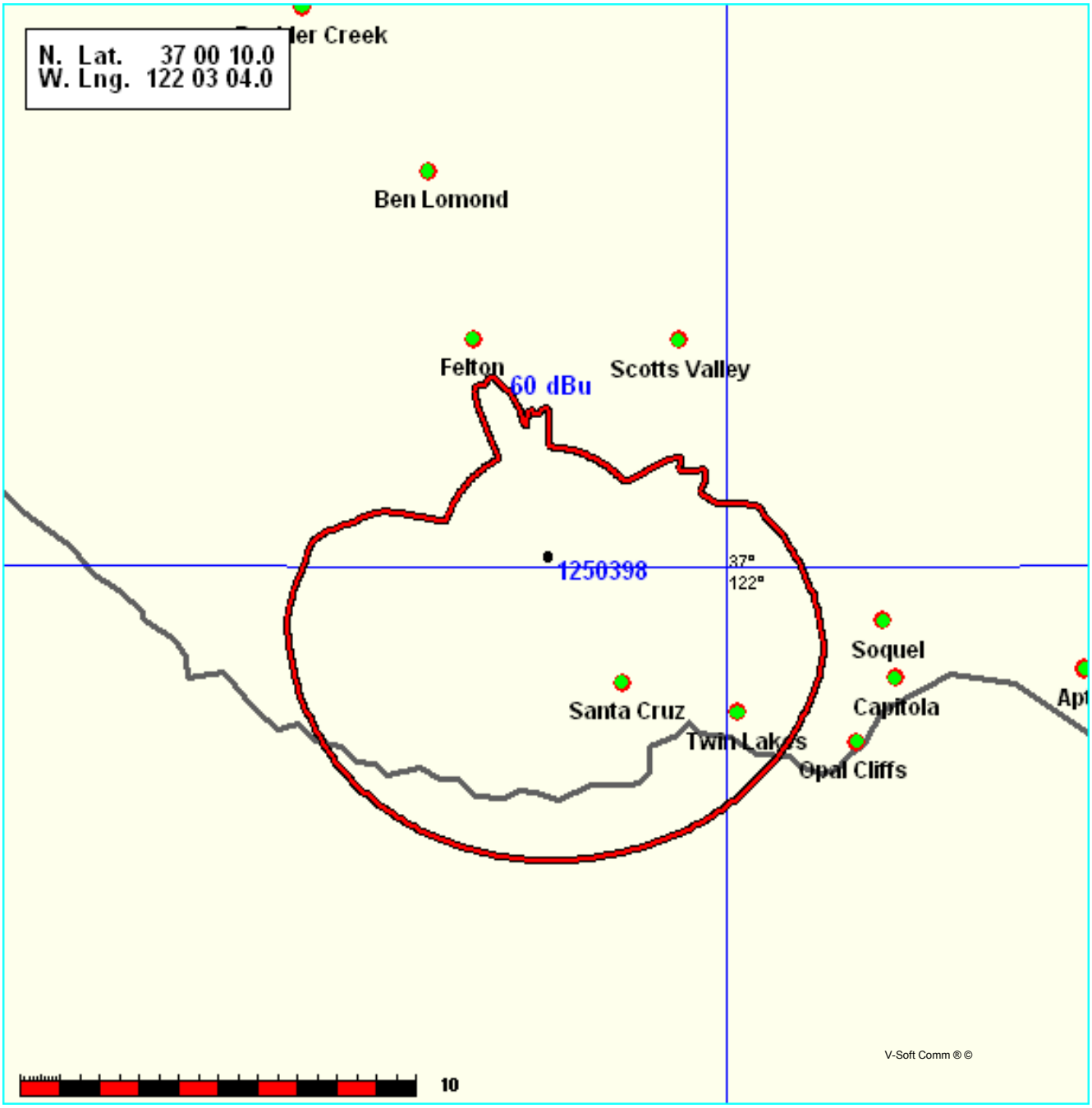
1250398 CH 248 D	KWAV CH 245 B BMLH20041028AIK
0.005 kW 260 M COR	18.0 kW, 1071 M COR
Prot. = 60 dBu	Prot. = 54 dBu
Intef. = 94 dBu	Intef. = 100 dBu



Pacifica Foundation, Inc.
Santa Cruz Translator

Coverage Study
09-02-2008

1250398 CH248 D 0.005 kW 260M COR
Prot. = 60 dBu.



AFFIDAVIT AND QUALIFICATIONS OF
DONALD E. MUSSELL JR.

State of California)
Bonny Doon)
County of Santa Cruz)

Donald E. Mussell Jr. affirms that he is a consulting radio and electronics engineer; that he is Certified as a Broadcast Engineer, Class 1, by the National Association of Radio and Telecommunications Engineers, Inc., License #E1-00619, issued in 1985;

That he is recognized as a Broadcast Technologist by the Society of Broadcast Engineers, License # 22301, and a member of the Society of Broadcast Engineers since 1980;

That he held a First Class Radiotelephone License from 1975 until 1985, when it was replaced by a lifetime General Class Radiotelephone license (PG-12-20588), issued by the Federal Communications Commission in January of 1985;

That he has submitted many applications to the Federal Communications Commission for broadcast and auxiliary broadcast construction permits and licenses, and that his experience in Radio and Television broadcast engineering extends over three decades;.

That he declares, under penalty of perjury, that the foregoing engineering exhibits were prepared by him or under his direction and supervision; and that the statements contained therein are true and correct to the best of his belief and knowledge.

Donald E. Mussell Jr. NCE-CBT
Consulting Engineer
October 1, 2008