



## Broadcast Engineering Services of Bonny Doon, Inc.

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Donald E. Mussell Jr. NCE-CBT  
Consulting Engineer

### **Engineering Statement New Translator for KPFA BNPFT-20080606AAQ Santa Cruz, California**

The Pacifica Foundation requests a construction permit for BNPFT-20080606AAQ. The translator is proposed to operate on Channel 248D, from an established electronic site on the UCSC campus in the mountains above Santa Cruz, the proposed city of license. This amendment modifies the underlying application by seeking to reduce the ERP of the facility.

The applicant proposes to utilize an existing 7 meter support pole directly adjacent to an existing 34 meter tower at this electronic site. The proposed antenna location is within an established electronic site, but the site is not located within 8 Km. of any airport, and none of the structures on this site exceed 61 meters, so there are no tower registrations listed or required. A non-directional antenna, along with a power of 5 watts ERP is proposed. The signal of KPFA will be received directly using a log periodic receive antenna. There is adequate signal from KPFA for this purpose.

This location, antenna and power level combination is clear of any prohibited overlap to any existing or proposed stations, with the exception of third adjacent KWAY Monterey (BMLH-20041028AIK). However, the proposed translator's 100 dbu contour does not overlap any populated area. The maximum distance to the extent of the overlap contour is 68.9 meters, and the closest permanent residence is over 79 meters distant from the proposed antenna location. 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 100 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.

The applicant is confident that this site will adequately serve the city of Santa Cruz while avoiding any interference to any populated areas.

Respectfully submitted,

Donald E. Mussell Jr. NCE-CBT  
Consulting Engineer  
September 10, 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. DATA 08-21-08  
122 03 04.0 W. SEARCH 09-02-08  
Average Protected F(50-50)= 5.49 km

CH CITY	CALL	TYPE STATE	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	APP _C_ CA		0.0 0.0	0.00 BNPFT20080606AAQ	37 00 10.0 122 03 04.0	0.010 260	13.6	4.3 Pacifica Foundation, Inc.	-17.26*<	-15.90*<
245B Monterey	KWAV	LIC _CX CA		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	APP _C_ CA		0.0 0.0	0.00 BNPFT20030313AAO	37 00 10.0 122 03 04.0	0.005 260	11.6	3.6 Pacifica Foundation, Inc.	-15.21*<	-15.21*<
247B San Francisco Grandfathered at 82KW @ 309M	KLLC	LIC _CN CA		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	LIC _CX CA		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	LIC NCN CA		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	LIC _CX CA		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	LIC DC_ CA		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	LIC _HN CA		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	APP DV_ CA		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	APP _C_ CA		336.1 155.9	83.32 BNPFT20030317CMU	37 41 17.0 122 26 07.0	0.009 435	0.2	11.1 Broadcast Towers, Inc.	78.62	72.04
251D Pleasanton	KISQ-FM2	LIC DHN CA		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

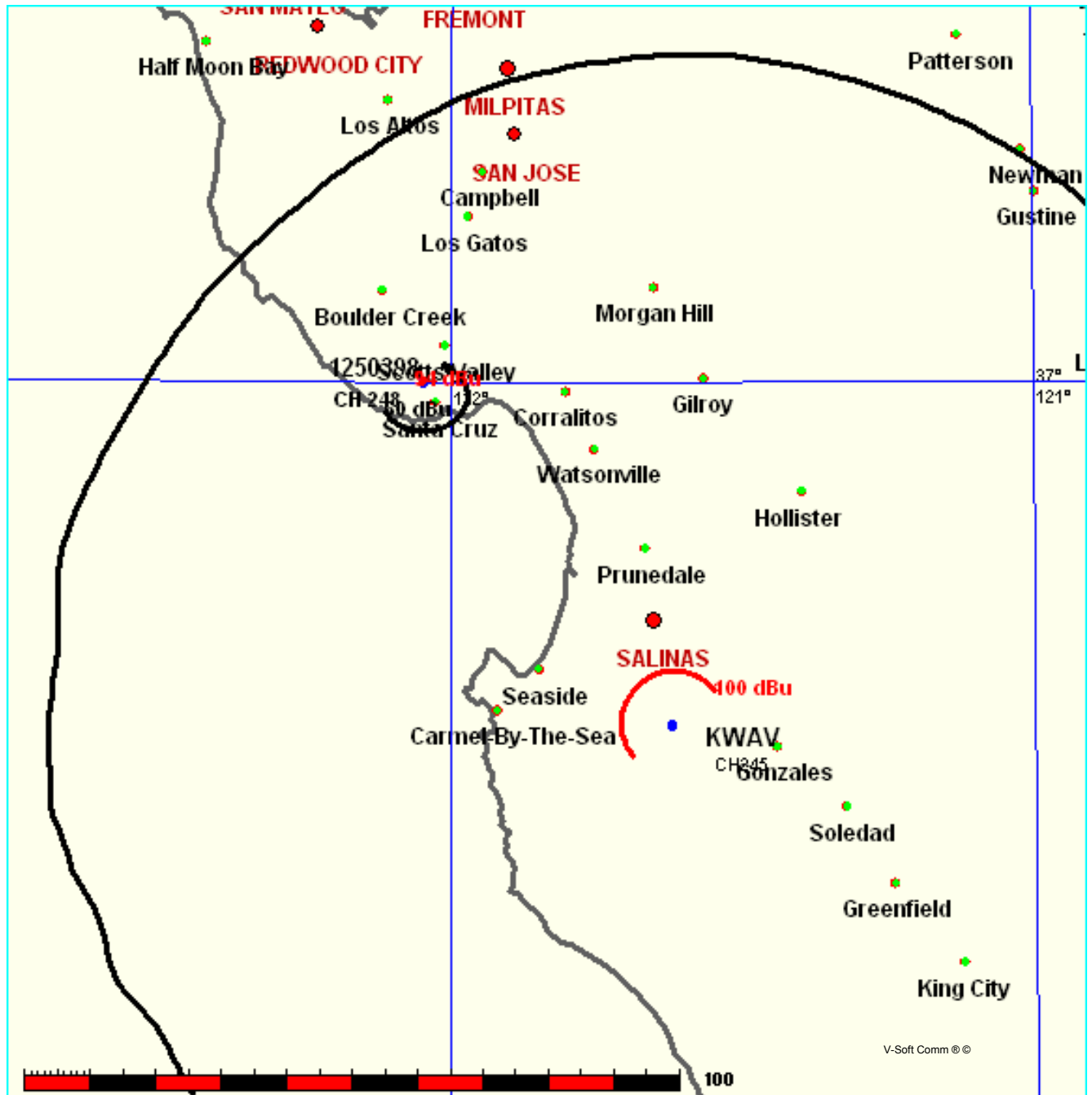
Terrain database is NGDC 30 SEC Distance + R = 73.215 or FCC Spacings in KM, Distance + M = Margin in KM  
Contour distances are on direct line to and from reference station. Reference zone = 1A. With 3rd Adj Channels.  
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (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  
0.005 kW 260 M COR  
Prot. = 60 dBu  
Intef. = 94 dBu

KWAV CH 245 B BMLH20041028AIK  
18.0 kW, 1071 M COR  
Prot. = 54 dBu  
Intef. = 100 dBu

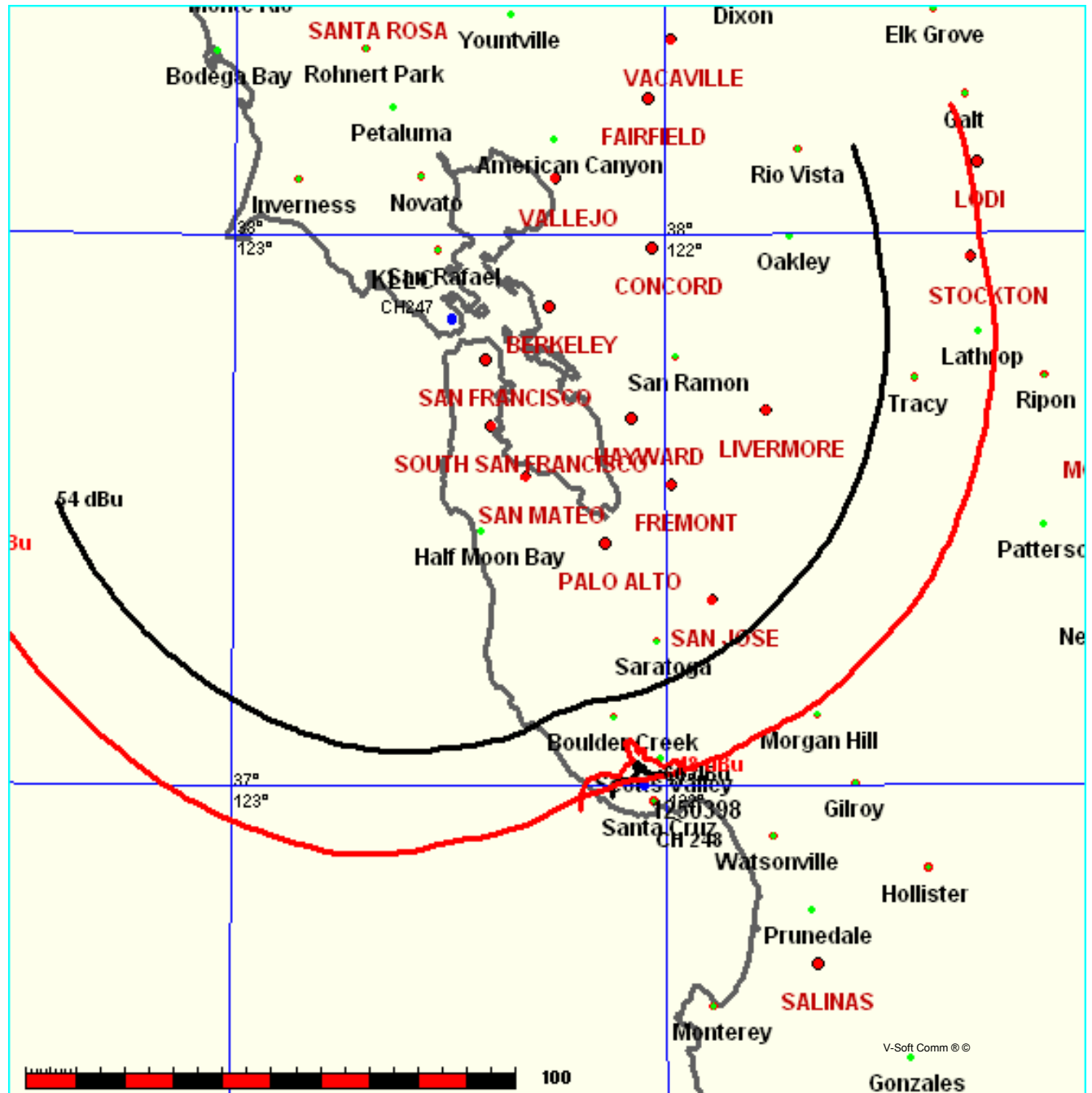


Pacifica Foundation, Inc.  
1250398-KLLC

FMCommander Single Allocation Study  
09-02-2008

1250398 CH 248 D  
0.005 kW 260 M COR  
Prot. = 60 dBu  
Intef. = 48 dBu

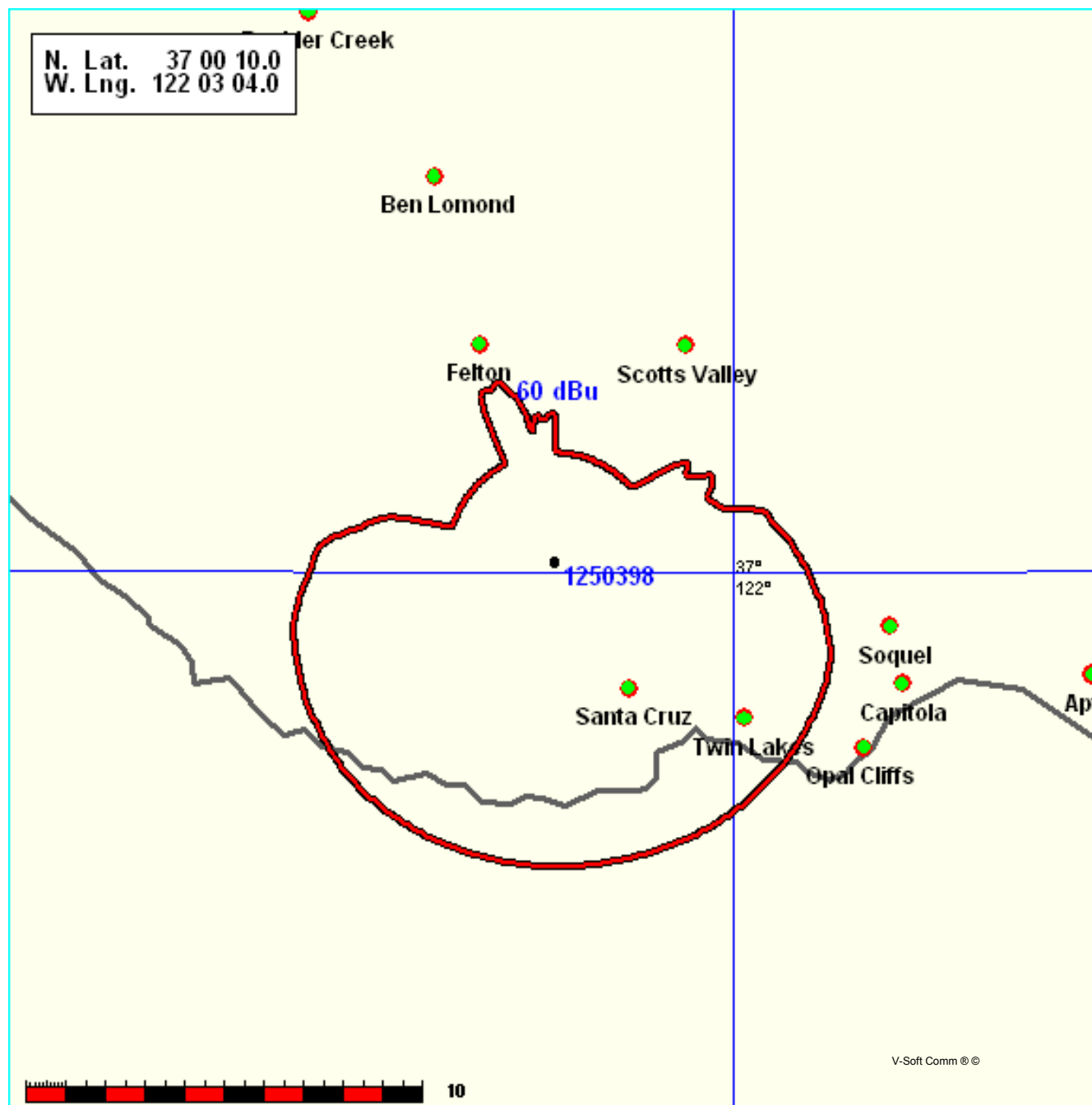
KLLC CH 247 B BLH19950321KB  
82.0 kW, 368 M COR  
Prot. = 54 dBu  
Intef. = 54 dBu



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.

A handwritten signature in black ink, appearing to read 'Donald E. Mussell Jr.', with a stylized, cursive script.

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Consulting Engineer  
September 10, 2008