

Broadcast Engineering Services of Bonny Doon, Inc.

Donald E. Mussell Jr. NCE-CBT
Consulting Engineer
740 Front Street Suite 305
Santa Cruz, Ca 95060

(808) 828-0209 Office
(831) 588-9463 Cell
dmsml@well.com
www.well.com/user/dmsml

**Engineering Statement
in support of a Minor Change
KAHU, Pahala, Hawaii
BLED-20131118BJY**

Hawaii Public Radio (HPR), licensee of KAHU, is requesting a minor change to the KAHU facilities, including a move to a new tower site, a power increase to 12 kilowatts and change from Class A to Class C2. The population served within the primary 60 dbu contour will increase from 1,601 persons to 81,644 persons. The city of license will be 100% encompassed by the proposed 60 dbu contour of this modification.

There are no full power FM or TV facilities in the entire state of Hawaii that are affected or overlapped by this proposal, except for co-owned KANO, licensed to Hilo, Hawaii (BLED-20080501ACI). Concurrently with this application, the licensee is filing an application that proposes to move KANO to Ch 206, and by doing so eliminate any overlap to this proposal. So this proposal is contingent with the grant of the change in channel for KANO. An allocation study, along with detail maps, is attached to this statement.

The proposed antenna system is a Shively model 6600-5-.9-SS, a five bay, horizontally polarized 9/10 wave spaced design, mounted 40 meters above ground. This antenna will produce a calculated worst-case RFR energy field of 3.47 mW/cm² microwatts per squared centimeter at a distance of 30 meters from the base of the tower support structure. This is just under 2% of the non-occupied limit, and is therefore compliant with the FCC rules concerning RFR both on and adjacent to the proposed tower location. There are no other radio broadcast facilities within 2 miles of this site.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'D. Mussell', with a stylized flourish at the end.

Donald E. Mussell Jr. NCE-CBT
Consulting Engineer
March 22, 2014

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

KAHU Minor change
Hawaii Public Radio, Inc.

REFERENCE CH# 217C2 - 91.3 MHz, Pwr= 12 kW, HAAT= 227.5 M, COR= 1718.2 M
19 31 25.3 N. Average Protected F(50-50)= 46.67 km
155 18 07.0 W. Omni-directional

DISPLAY DATES
DATA 03-21-14
SEARCH 03-22-14

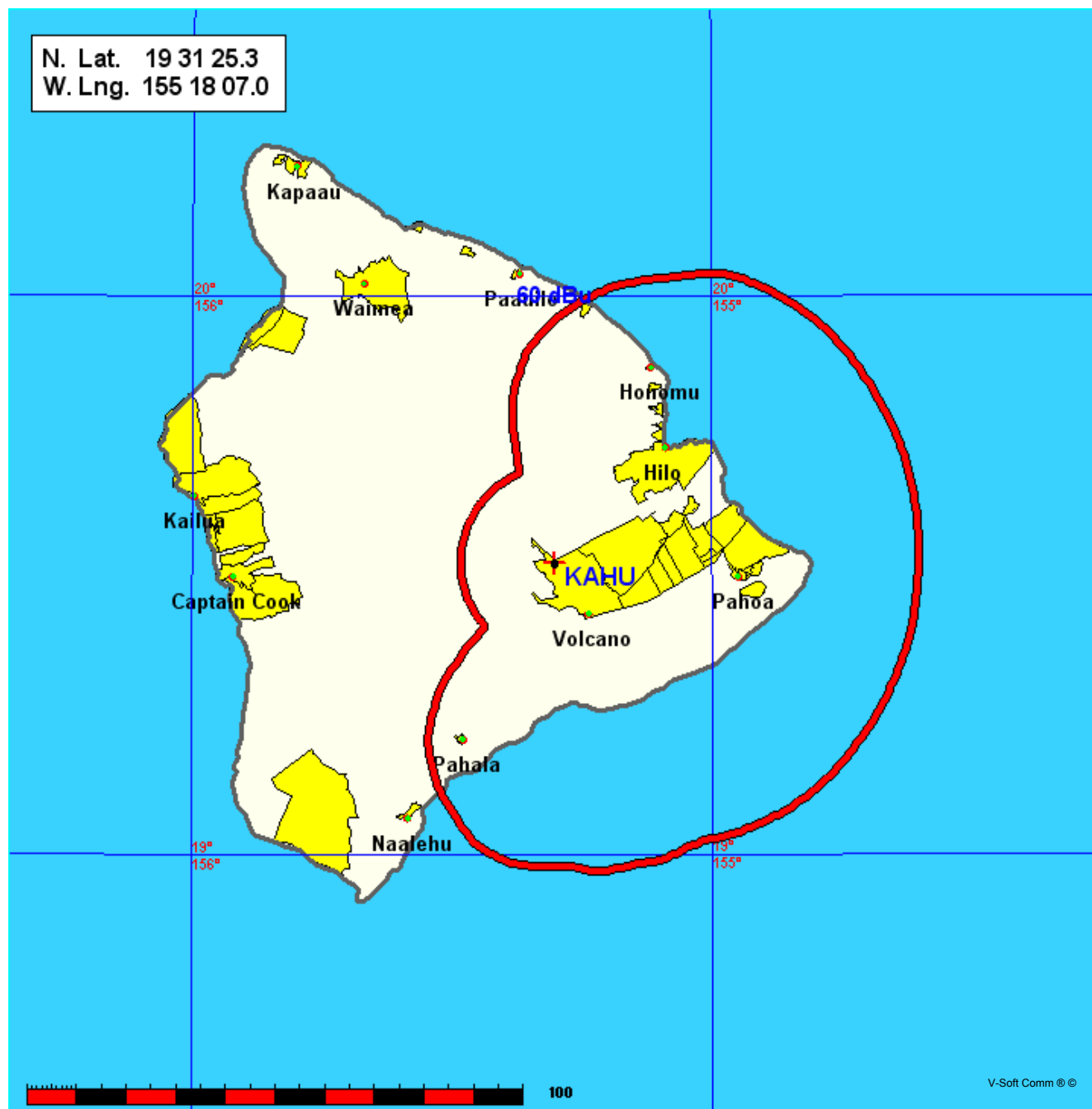
CH CITY	CALL	TYPE STATE	ANT HI	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
216C2 Hilo	KANO	LIC _CX HI		67.5 247.5	19.88 BLED20080501ACI	19 35 31.4 155 07 36.0	30.000 -140	37.9 536	23.6 Hawaii Public Radio, Inc.	-91.0*	-111.1*
220D Hilo	K220EO	CP DC_ HI		38.8 218.9	27.49 BPFT20120831ABB	19 43 00.0 155 08 13.0	0.250 -140	0.9 300	6.4 The Moody Bible Institute	-42.7*	14.4
220D Hilo	K220EO	LIC DVN HI		38.8 218.9	27.49 BLFT19970325TB	19 43 00.0 155 08 13.0	0.040 -143	0.1 299	1.8 The Moody Bible Institute	-41.8*	18.0
Translator for WGNR, Monee, IL. Vertical Polarization Only											
219A Pahala	KAHU	LIC NHX HI		207.7 27.6	40.50 BLED20131118BJY	19 12 00.0 155 28 54.0	0.800 -323	1.6 254	9.6 Hawaii Public Radio	-11.7*	25.7
271C2 Kurtistown	KTBH-FM«	LIC _HX HI		53.7 233.8	32.51 BLH20080324AFT	19 41 48.0 155 03 05.0	50.000 -63	12.8 83	58.8 Resonate Hawaii Llc	20.0R	12.5M
219D Kalaoa	K219LK	LIC _V_ HI		288.8 108.6	68.51 BLFT20120131AIN	19 43 15.0 155 55 16.0	0.010 867	0.2 1659	3.2 Calvary Chapel of Twin Fal	49.3	57.4

Terrain database is FCC 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= - Zone 2, Co to 3rd adjacent.
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.
« = Station meets FCC minimum distance spacing for its class.

KAHU Minor change
Hawaii Public Radio, Inc.

Coverage Study - FCC NGDC 30 Sec
03-22-2014

KAHU CH217 C2, 12.0 kW, 227.5M HAAT, 1718.2M COR AMSL
Service Contour = 60 dBu. Population = 81,644

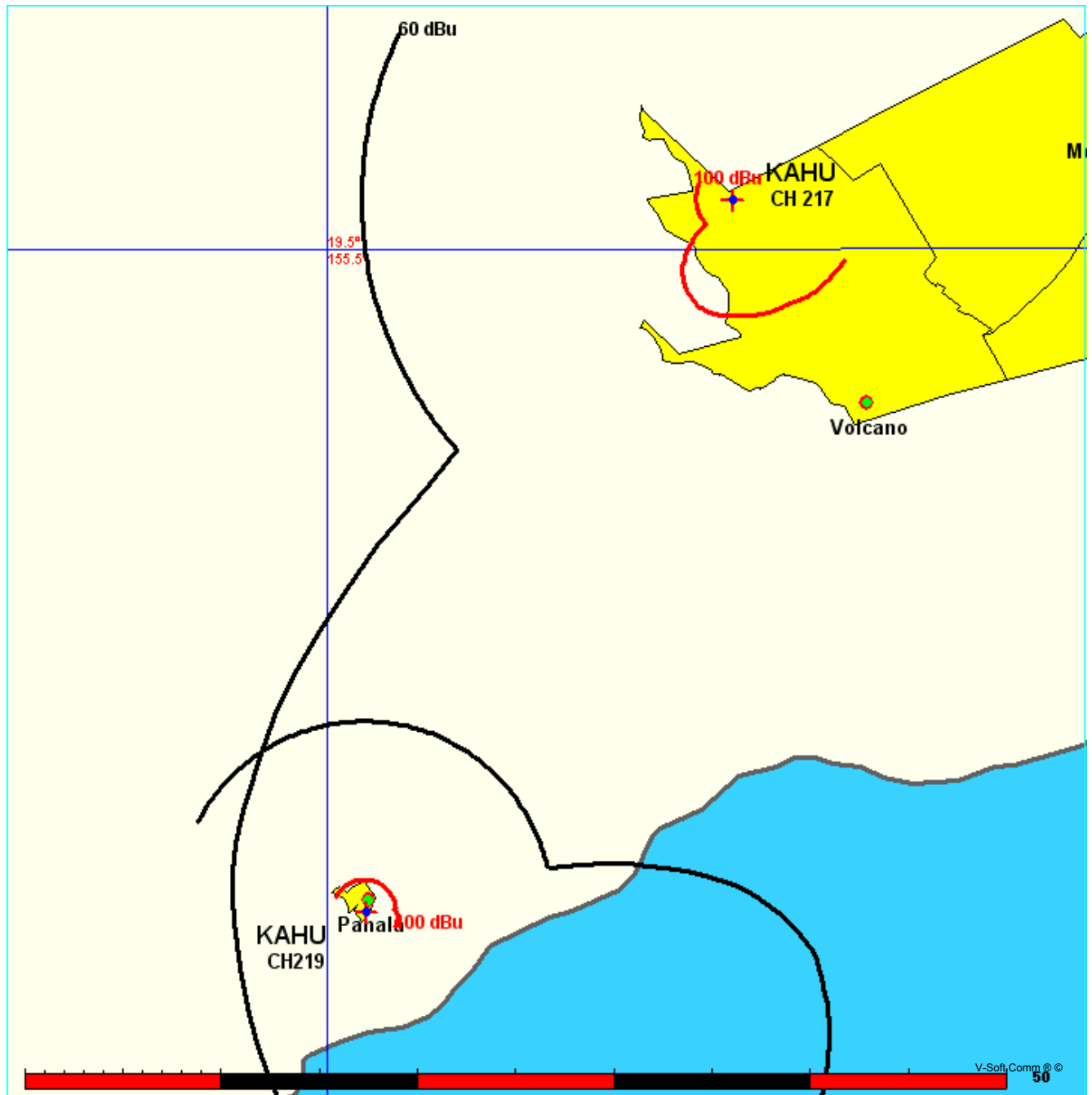


KAHU Minor change
Hawaii Public Radio, Inc.

FMCommander Single Allocation Study - 03-22-2014 - FCC NGDC 30 Sec
KAHU's Overlaps (In= -11.75 km, Out= 25.66 km)

KAHU CH 217 C2
Lat= 19 31 25.3, Lng= 155 18 07.0
12.0 kW 227.5 M HAAT, 1718.2 M COR
Prot.= 60 dBu, Intef.= 100 dBu

KAHU CH 219 A 73.215 N BLED20131118BJY
Lat= 19 12 00.0, Lng= 155 28 54.0
0.8 kW -323 M HAAT, 254 M COR
Prot.= 60 dBu, Intef.= 100 dBu



**AFFIDAVIT AND QUALIFICATIONS OF
DONALD E. MUSSELL JR.**

State of Hawaii)
Kilauea)
County of Kauai)

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 four 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.

Donald E. Mussell Jr. NCE-CBT
Consulting Engineer
March 22, 2014