

MINOR CHANGE APPLICATION
HILO CHRISTIAN BROADCASTING CORP.
KCIF RADIO STATION
CH 212A - 90.3 MHZ - 5.0 KW
HILO, HAWAII
July 2004

EXHIBIT A

Non-Commercial Allocation Analysis & §73.509 Study

Due to its operating channel, KCIF could potentially impact other authorized or proposed non-commercial stations operating on co- or adjacent FM channels. The detailed list of stations reviewed as potentially impacted by Channel 212A at Hilo, Hawaii, is shown on Exhibit A1. The only nearby station which reviewed is an outstanding permit for KPHL, Channel 213C2, Pahala, Hawaii. The provisions of §73.509 of the rules will be met by specifying less than maximum Class A facilities.

§73.509 Analysis

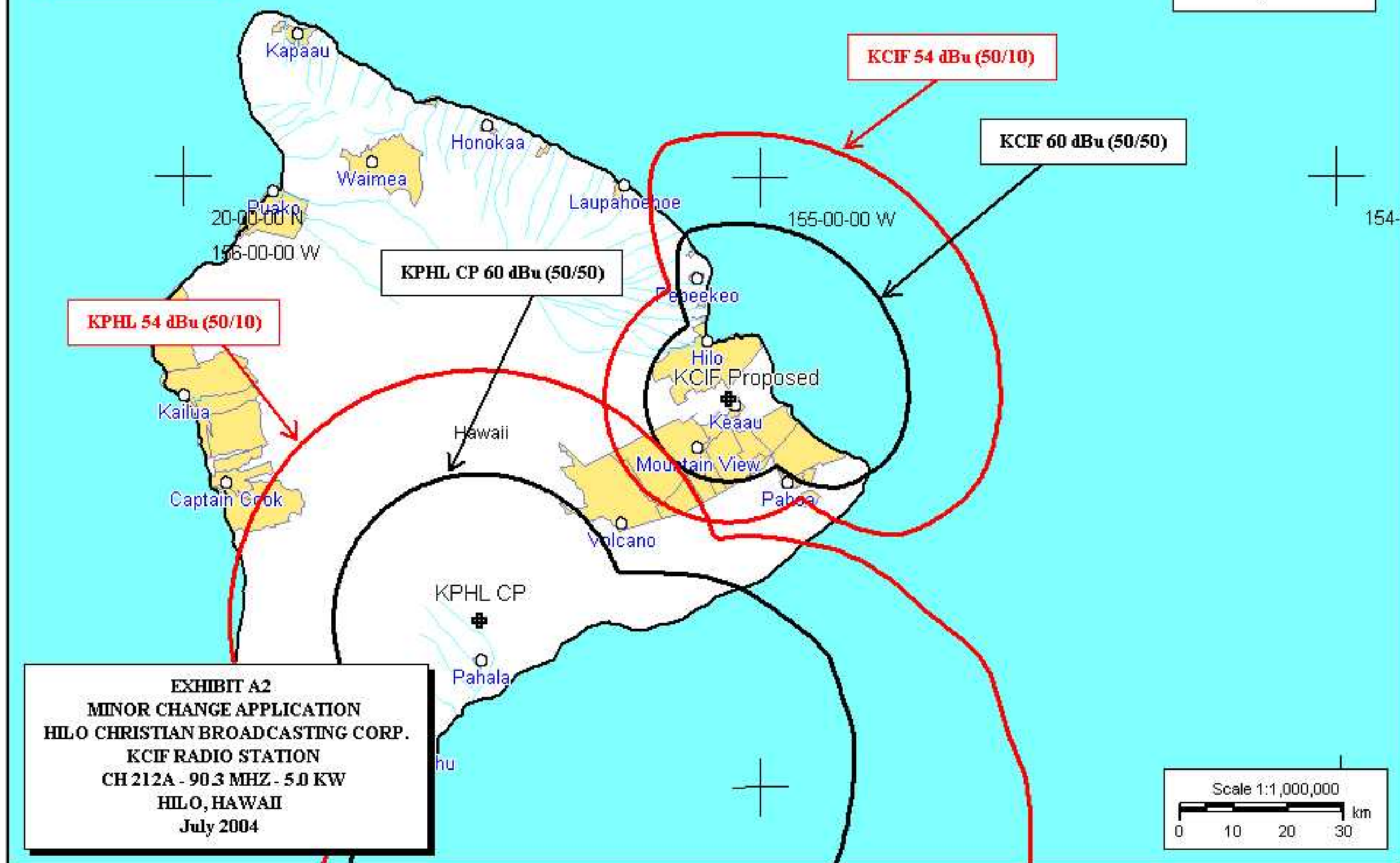
Exhibits A2 specifically demonstrate that there will be no prohibited overlap between the proposed KCIF and the authorized KPHL. Attached as Exhibits A3 and A4 are the tabulated distances to the protected and interfering contours, along pertinent arcs, of the proposed KCIF and KPHL. Further, attached as Exhibit A5 are the tabulated and protected contours of the proposed KCIF, in ten degree increments. Again, there is no prohibited overlap between the facilities.

KCIF Proposed

Latitude: 19-38-14 N
Longitude: 155-03-19 W
ERP: 5.00 kW
Channel: 212A
AMSL Height: 162.0 m

Graham Brock, Inc. - Broadcast Technical Consultants**KPHL CP**

BPED-19980729MD
Latitude: 19-16-26 N
Longitude: 155-29-04 W
ERP: 50.00 kW
Channel: 213C2
AMSL Height: 768.0 m



Stations Removed by 53 and 54 Channels (I.F. Relationship)

The nearest station operating on a frequency either 53 or 54 channels removed from this instant proposal is KLHI-FM, Channel 266C, Lahaina, Hawaii. The KLHI-FM site is located on a bearing of 310.0° at a distance of 177.6 kilometers from the proposed KCIF site. Pursuant to §73.207 of the rules, KCIF must be a minimum of 29.0 kilometers from the KLHI-FM site. KCIF is located more than 140.0 kilometers farther than the required distance. Therefore, this proposal does not impact any intermediate frequency stations.

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EXHIBIT A1

Interference analysis for KCIF radio station Hilo, Hawaii
Using proposed site as reference

REFERENCE CH# 212A - 90.3 MHz, Pwr= 5 kW, HAAT=-40.2M, COR= 162 M DISPLAY DATES

19 38 14 N Average Protected F(50-50)= 15.0 km DATA 07-09-04
155 03 19 W Ave. F(50-10) 40 dBu= 64.0 54 dBu= 22.4 100 dBu= 1.6 SEARCH 07-09-04

CH CITY	CALL	TYPE STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	COR (M) INT (km)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
212A	KCIF	LIC VN	339.2	10.60	19 43 36	0.85	33	25.7	-48.84	-81.03
Hilo		HI	159.2	BLED-19980720KC	155 05 29	-74	33.7	Hilo Christian Broadcasting		
213C2	KPHL.C	CP CN	228.2	60.40	19 16 26	50	768	15.0	0.08	11.50
Pahala		HI	48.2	BPED-19980729MD	155 29 04	-106	45.3	Broadcasting For The Chall.		
06Z2C	KLEI	LI DHY	275.7	90.74	19 42 56	0.165	1760	233.6	To Grd B=	77.22
Kailua Kona		HI	95.7	BLCT-19880427KF	155 55 00	-17		Aina'e Co., Ltd		

ERP and HAAT are on direct line to and from reference station.

***Affixed to 'IN' or 'Out' values = site inside protected contour.

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EXHIBIT A3

KCIF - Proposed
Channel = 212A
Max ERP = 5 kW
RCAMSL = 162.5 M
N. Lat = 19 38 14
W. Lng = 155 03 19

KPHL CP - BPED-19980729MD
Channel = 213C2
Max ERP = 50 kW
RCAMSL = 768 M
N. Lat = 19 16 26
W. Lng = 155 29 04

Protected
60 dBu

Interfering
54 dBu

3 Second terrain database

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
205.0	005.0000	-0225.1	015.0	055.3	050.0000	-0051.3	047.0	53.6
206.0	005.0000	-0229.1	015.0	055.0	050.0000	-0051.3	046.9	53.6
207.0	005.0000	-0233.3	015.0	054.7	050.0000	-0051.3	046.8	53.6
208.0	005.0000	-0237.8	015.0	054.4	050.0000	-0056.2	046.6	53.7
209.0	005.0000	-0242.5	015.0	054.1	050.0000	-0056.2	046.5	53.7
210.0	005.0000	-0247.7	015.0	053.9	050.0000	-0056.2	046.4	53.7
211.0	005.0000	-0252.8	015.0	053.6	050.0000	-0056.2	046.3	53.8
212.0	005.0000	-0257.8	015.0	053.3	050.0000	-0061.3	046.2	53.8
213.0	005.0000	-0262.5	015.0	053.0	050.0000	-0061.3	046.1	53.8
214.0	005.0000	-0266.9	015.0	052.6	050.0000	-0061.3	046.0	53.8
215.0	005.0000	-0271.1	015.0	052.3	050.0000	-0067.9	045.9	53.8
216.0	005.0000	-0275.4	015.0	052.0	050.0000	-0067.9	045.9	53.9
217.0	005.0000	-0279.4	015.0	051.7	050.0000	-0067.9	045.8	53.9
218.0	005.0000	-0283.4	015.0	051.4	050.0000	-0075.4	045.7	53.9
219.0	005.0000	-0287.4	015.0	051.1	050.0000	-0075.4	045.7	53.9
220.0	005.0000	-0291.4	015.0	050.7	050.0000	-0075.4	045.6	53.9
221.0	005.0000	-0295.3	015.0	050.4	050.0000	-0083.7	045.6	53.9
222.0	005.0000	-0299.2	015.0	050.1	050.0000	-0083.7	045.5	53.9
223.0	005.0000	-0303.6	015.0	049.8	050.0000	-0083.7	045.5	54.0
224.0	005.0000	-0308.0	015.0	049.4	050.0000	-0094.2	045.5	54.0
225.0	005.0000	-0312.6	015.0	049.1	050.0000	-0094.2	045.4	54.0
226.0	005.0000	-0317.5	015.0	048.8	050.0000	-0094.2	045.4	54.0
227.0	005.0000	-0322.3	015.0	048.5	050.0000	-0105.8	045.4	54.0
228.0	005.0000	-0326.8	015.0	048.1	050.0000	-0105.8	045.4	54.0
229.0	005.0000	-0331.2	015.0	047.8	050.0000	-0105.8	045.4	54.0
230.0	005.0000	-0335.6	015.0	047.5	050.0000	-0119.3	045.4	54.0
231.0	005.0000	-0339.7	015.0	047.1	050.0000	-0119.3	045.4	54.0
232.0	005.0000	-0343.5	015.0	046.8	050.0000	-0119.3	045.5	54.0
233.0	005.0000	-0346.5	015.0	046.5	050.0000	-0137.6	045.5	54.0
234.0	005.0000	-0348.8	015.0	046.1	050.0000	-0137.6	045.5	54.0
235.0	005.0000	-0350.8	015.0	045.8	050.0000	-0137.6	045.5	53.9
236.0	005.0000	-0352.7	015.0	045.5	050.0000	-0154.7	045.6	53.9
237.0	005.0000	-0354.4	015.0	045.2	050.0000	-0154.7	045.6	53.9
238.0	005.0000	-0356.2	015.0	044.9	050.0000	-0154.7	045.7	53.9
239.0	005.0000	-0358.1	015.0	044.5	050.0000	-0154.7	045.8	53.9
240.0	005.0000	-0359.8	015.0	044.2	050.0000	-0167.8	045.8	53.9
241.0	005.0000	-0361.4	015.0	043.9	050.0000	-0167.8	045.9	53.9
242.0	005.0000	-0362.9	015.0	043.6	050.0000	-0167.8	046.0	53.8
243.0	005.0000	-0363.9	015.0	043.3	050.0000	-0181.6	046.1	53.8
244.0	005.0000	-0364.4	015.0	043.0	050.0000	-0181.6	046.1	53.8
245.0	005.0000	-0364.2	015.0	042.7	050.0000	-0181.6	046.2	53.8

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EXHIBIT A4

KPHL CP - BPED-19980729MD
Channel = 213C2
Max ERP = 50 kW
RCAMSL = 768 M
N. Lat = 19 16 26
W. Lng = 155 29 04

KCIF - Proposed
Channel = 212A
Max ERP = 5 kW
RCAMSL = 162.5 M
N. Lat = 19 38 14
W. Lng = 155 03 19

Protected
60 dBu

Interfering
54 dBu

3 Second terrain database

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
045.0	050.0000	-0154.7	026.5	230.6	005.0000	-0339.7	033.9	47.6
046.0	050.0000	-0137.6	026.5	229.9	005.0000	-0335.6	033.9	47.6
047.0	050.0000	-0119.3	026.5	229.1	005.0000	-0331.2	033.9	47.6
048.0	050.0000	-0105.8	026.5	228.3	005.0000	-0326.8	033.9	47.6
049.0	050.0000	-0094.2	026.5	227.5	005.0000	-0326.8	033.9	47.6
050.0	050.0000	-0083.7	026.5	226.7	005.0000	-0322.3	033.9	47.6
051.0	050.0000	-0075.4	026.5	225.9	005.0000	-0317.5	033.9	47.6
052.0	050.0000	-0067.9	026.5	225.2	005.0000	-0312.6	034.0	47.6
053.0	050.0000	-0061.3	026.5	224.4	005.0000	-0308.0	034.0	47.6
054.0	050.0000	-0056.2	026.5	223.6	005.0000	-0308.0	034.1	47.5
055.0	050.0000	-0051.3	026.5	222.9	005.0000	-0303.6	034.2	47.5
056.0	050.0000	-0046.8	026.5	222.1	005.0000	-0299.2	034.3	47.5
057.0	050.0000	-0042.5	026.5	221.4	005.0000	-0295.3	034.4	47.4
058.0	050.0000	-0038.0	026.5	220.6	005.0000	-0295.3	034.6	47.4
059.0	050.0000	-0034.1	026.5	219.9	005.0000	-0291.4	034.7	47.3
060.0	050.0000	-0029.4	026.5	219.2	005.0000	-0287.4	034.9	47.3
061.0	050.0000	-0023.6	026.5	218.5	005.0000	-0283.4	035.0	47.2
062.0	050.0000	-0017.9	026.5	217.8	005.0000	-0283.4	035.2	47.1
063.0	050.0000	-0012.6	026.5	217.1	005.0000	-0279.4	035.4	47.1
064.0	050.0000	-0007.8	026.5	216.4	005.0000	-0275.4	035.6	47.0
065.0	050.0000	-0002.8	026.5	215.8	005.0000	-0275.4	035.8	46.9
066.0	050.0000	0002.8	026.5	215.2	005.0000	-0271.1	036.1	46.8
067.0	050.0000	0008.7	026.5	214.5	005.0000	-0271.1	036.3	46.8
068.0	050.0000	0014.7	026.5	213.9	005.0000	-0266.9	036.6	46.7
069.0	050.0000	0020.4	026.5	213.3	005.0000	-0262.5	036.8	46.6
070.0	050.0000	0025.9	026.5	212.8	005.0000	-0262.5	037.1	46.5
071.0	050.0000	0030.8	026.8	211.9	005.0000	-0257.8	037.2	46.5
072.0	050.0000	0035.4	028.4	209.8	005.0000	-0247.7	036.3	46.8
073.0	050.0000	0039.9	030.0	207.4	005.0000	-0233.3	035.5	47.0
074.0	050.0000	0044.5	031.6	204.9	005.0000	-0225.1	034.8	47.3
075.0	050.0000	0049.9	033.5	201.8	005.0000	-0213.4	034.0	47.6
076.0	050.0000	0056.5	035.6	198.3	005.0000	-0200.3	033.3	47.8
077.0	050.0000	0064.8	037.6	194.7	005.0000	-0190.4	032.8	48.0
078.0	050.0000	0075.4	040.0	190.5	005.0000	-0177.0	032.5	48.2
079.0	050.0000	0083.4	041.6	187.3	005.0000	-0160.8	032.5	48.1
080.0	050.0000	0092.2	043.3	184.1	005.0000	-0147.5	032.8	48.1
081.0	050.0000	0101.5	045.0	181.0	005.0000	-0130.7	033.2	47.9
082.0	050.0000	0110.5	046.5	178.3	005.0000	-0118.2	033.8	47.7
083.0	050.0000	0118.3	047.7	176.2	005.0000	-0110.6	034.5	47.4
084.0	050.0000	0127.3	049.0	174.0	005.0000	-0103.1	035.3	47.1
085.0	050.0000	0136.1	050.3	172.0	005.0000	-0095.2	036.2	46.8

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EXHIBIT A5

Predicted Contours:

N. Lat. = 19 38 14 - Tabulated Protected and Interfering Contour Data
W. Lng. = 155 03 19 - KCIF Radio Station - Hilo, Hawaii

HAAT and Distance to Contour - FCC Method - 03 Arc Second terrain database

Azi.	HAAT	ERP kW	dBk	Field	60-F5	40-F1	54-F1	100-F1
000	141.8	5.0000	6.99	1.000	31.70	90.32	48.14	2.98
010	144.9	5.0000	6.99	1.000	32.04	90.76	48.56	3.00
020	147.7	5.0000	6.99	1.000	32.35	91.16	48.94	3.03
030	150.0	5.0000	6.99	1.000	32.61	91.48	49.24	3.05
040	151.5	5.0000	6.99	1.000	32.78	91.70	49.45	3.07
050	152.3	5.0000	6.99	1.000	32.87	91.81	49.56	3.07
060	152.7	5.0000	6.99	1.000	32.91	91.86	49.60	3.08
070	153.1	5.0000	6.99	1.000	32.96	91.91	49.66	3.08
080	153.4	5.0000	6.99	1.000	32.99	91.95	49.70	3.08
090	151.9	5.0000	6.99	1.000	32.83	91.75	49.50	3.07
100	147.5	5.0000	6.99	1.000	32.33	91.13	48.91	3.03
110	137.2	5.0000	6.99	1.000	31.21	89.66	47.53	2.94
120	110.3	5.0000	6.99	1.000	28.41	85.54	43.71	2.72
130	84.6	5.0000	6.99	1.000	25.10	81.04	38.40	2.44
140	46.0	5.0000	6.99	1.000	18.81	71.68	27.63	1.92
150	7.6	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
160	-39.6	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
170	-86.7	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
180	-126.7	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
190	-173.3	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
200	-206.5	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
210	-247.7	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
220	-291.4	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
230	-335.6	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
240	-359.8	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
250	-359.1	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
260	-338.3	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
270	-316.0	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
280	-284.8	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
290	-235.0	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
300	-171.2	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
310	-105.9	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
320	-47.0	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
330	14.9	5.0000	6.99	1.000	15.00	64.03	22.39	1.61
340	98.0	5.0000	6.99	1.000	26.91	83.47	41.39	2.59
350	138.8	5.0000	6.99	1.000	31.37	89.89	47.74	2.95

AMSL= 162.5 M