

ENGINEERING EXHIBIT
IN SUPPORT OF AN AMENDMENT TO AN
APPLICATION FOR CONSTRUCTION PERMIT
FCC File No. BP-20040827ACH
KHCM - HONOLULU, HAWAII
1180 kHz - 1.0 kW D/1.0 kW N - ND-U
Facility ID: 13985

Applicant: Salem Media of Hawaii, Inc.

February, 2006

***CARL T. JONES***
CORPORATION

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Section III-A of FCC Form 301

Engineering Statement of Cynthia M. Jacobson

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**ENGINEERING STATEMENT OF CYNTHIA M. JACOBSON
IN SUPPORT OF AN AMENDMENT TO AN
APPLICATION FOR CONSTRUCTION PERMIT
FCC FILE No. BP-20040827ACH
KHCM – HONOLULU, HAWAII
1180 kHz - 1.0 kW D/1.0 kW N - ND-U
Facility ID: 13985**

Applicant: Salem Media of Hawaii, Inc.

I am a Consulting Engineer, an employee in the firm of Carl T. Jones Corporation, with offices located in Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission. I am a Registered Professional Engineer in the Commonwealth of Virginia, Registration No. 027914.

GENERAL

This office has been authorized by Salem Media of Hawaii, Inc. ("Salem"), licensee of standard broadcast station KHCM, Honolulu, Hawaii, to prepare this statement, FCC Form 301 (Section III-A), and the attached engineering exhibits in support of an Amendment to an Application for Construction Permit, FCC File No. BP-20040827ACH, seeking authority to decrease the proposed operating power from 6.0 kW day/4.5 kW night to 1.0 kW day and night on the frequency of 1180 kHz. No other changes are proposed.

This power reduction is in response to the FCC's request that the present 40 mV/m limit at the FCC monitoring station be maintained. Based upon measurements of KHCM on 1170 kHz in the vicinity of the monitoring station, it was determined that a proposed

operating power of 1.0 kW would meet this criteria.

TRANSMITTER SITE AND VICINITY

The transmitter site specified herein is the same as authorized in a previous Construction Permit, FCC File No. BP-20020206AAH¹ and the pending Application for Construction Permit² being amended herein. This is the site from which KHCM currently broadcasts under a Special Temporary Authority. The geographic coordinates of the non-directional antenna are:

21 - 26 - 18 North Latitude

157 - 59 - 29 West Longitude

The site photographs depicting the topography in the vicinity of the transmitter site are contained in FCC Files. The site elevation was obtained from data on file with the FCC.

ANTENNA SYSTEM

The antenna system consists of one tower. The existing tower is a folded unipole, steel radiator or uniform cross-section, guyed tower, 77.0 electrical degrees in height.

GROUND SYSTEM

The ground system is comprised of 120 equally spaced copper radials, 64.1 meters

¹Authorization expired 06/04/2005.

²FCC File No. BP-20040827ACH

in length.

BLANKETING AND STATION INTERACTION

The present and proposed daytime and nighttime 1000 mV/m contours are depicted in Figure 1. The population within the proposed KHCM 1000 mV/m contour is less than 300 persons. In response to all complaints of blanketing interference, the applicant will undertake steps to mitigate the blanketing effects in accordance with the requirements of Section 73.88.

The proposed antenna site is located greater than 3 kilometers from other area AM stations with the exception of KUPA with which “diplexing” is proposed. There are no operating FM stations or TV stations located within 10 kilometers of the proposed site. It is expected that no detrimental interaction will occur with any station due to the frequency change of KHCM.

PROTECTION OF FCC MONITORING STATION

An FCC monitoring station, referred to as the “Honolulu Office,” is located in Waipahu, Hawaii. The 10 mV/m field strength at the FCC monitoring station triggering coordination with the Enforcement Bureau as required by Section 73.1030(c) of the Rules is exceeded. The current FCC specified limit for KHCM is 40 mV/m. Therefore, it is requested that KHCM retain the specified maximum limit of 40 mV/m. It is expected that no negative impact will occur since KHCM is only requesting a 10 kHz frequency change.

The power level of 1.0 kW was determined by conducting measurements on 1170 kHz. It is believed that this power level will suffice for meeting the 40 mV/m field strength limitation at the FCC monitoring station.

COVERAGE CONTOURS

Field strength contours were calculated using the “equivalent distance” method for paths consisting of more than one conductivity. All conductivity data employed in the calculation of field strength contours was obtained from FCC Figure M-3.

The present and proposed daytime service contours are shown in Figures 2 and 3. The present and proposed 0.5 mV/m coverage contours are shown in Figure 4.

The present and proposed nighttime service contours are shown in Figure 7.

Neither the daytime nor the nighttime contour encompasses the entire city of license. Therefore, it is respectfully requested that a waiver of section 73.24(i) of the Rules be granted.

JUSTIFICATION OF WAIVER

Hawaii is the only state in the Union with no incorporated places recognized by the Census Bureau. All places shown for Hawaii are Census Designated Places (“CDP”). By agreement with the State of Hawaii, the Census Bureau does not show data separately for the city of Honolulu. The city of Honolulu is coextensive with Honolulu County. CDP’s are densely settled areas of population that are identifiable by name, but are not legally

incorporated. CDP's have no legal status, nor do they have elected officials to serve municipal functions. As the Commission recognized in *Family Media, Inc.*, 102 F.C.C.2d 759, ¶ 7 (ALJ 1985):

The only governmental entities in the State of Hawaii are its five counties since there are no communities or places with organized municipal governments. The geographical boundaries of the City of Honolulu are coextensive with the County of Honolulu; that is, the people of the city and county of Honolulu constitute a single body politic incorporated under the name "City and County of Honolulu" pursuant to the Articles of Incorporation of their revised charter approved on November 7, 1972. The coextensive City and County of Honolulu is comprised of the entire Island of Oahu and all other islands in the State of Hawaii which are not included within any other county in the State. The other islands include certain largely uninhabited islands extending approximately 1,400 – 1,500 miles westward from the Island of Oahu to Kure Island.

Both the present and proposed technical facility fail to meet the requisite service to the city of license, which is actually the County of Honolulu (or the entire Island of Oahu), see Figure 3. The present 5.0 mV/m daytime contour covers 25.1% of the Island of Oahu, while the proposed 5.0 mV/m daytime contour covers 21.4%. A 3.7% decrease in 5.0 mV/m coverage of Oahu will result from the proposed operation.

Likewise, Figure 7 depicts the nighttime interference-free contours of both the present and proposed facility. Neither contour fully encompasses the community of license (the entire Island of Oahu). The 5.0 mV/m contour is higher than the proposed NIF of 1.57 mV/m and the present NIF of 1.97 mV/m³, thus the 5.0 mV/m contour becomes the

³ The present NIF covers 40.8% and the proposed NIF covers 57.0% of the Island of Oahu.

community service contour.

In reality, KHCM has not been operating with the licensed facilities for several years. In fact, KHCM is operating pursuant to an STA at the herein proposed site on the frequency of 1170 kHz with a nominal power of 1.0 kW to maintain the 40 mV/m field at the FCC monitor station. Thus, coverage of the island of Oahu will be no less than the current STA facilities of KCHM.

Due to the extremely rugged terrain in the Hawaiian Islands, very few tower sites exist. As can be noted over the years, tower sites are becoming more difficult to secure on the Hawaiian Islands. Therefore, it is submitted that the public interest would be served by a waiver of Section 73.24(i) of the Rules and grant of the KHCM proposal described herein.

DAYTIME ALLOCATION STUDY

There is one third-adjacent channel station within a distance to warrant a daytime allocation study. As shown in Figure 5, the proposed facility will not have a negative effect on the third-adjacent station.

NIGHTTIME ALLOCATION STUDY

The frequency of 1180 kHz is a US Class A channel. WHAM, Rochester, New York is the Class A station of concern. Due to the distance separation between WHAM and the proposed facilities of KHCM, an exhibit is not attached herein. The proposed night facilities

would have to radiate in excess of 2500 mV/m for the 0.025 mV/m - 10% skywave contour to overlap the 0.5 mV/m - 50% skywave contour of WHAM. KHCM proposes a radiation of 297.5 mV/m, considerably less than the permitted 2500 mV/m. Therefore, no overlap of skywave contours will occur.

The proposed facility of KHCM will not raise the limit of any station. Figure 6 is a tabulation of RSS calculations of co-channel and first-adjacent stations in which KHCM may impact. A review of these studies on a station-by-station basis finds that the proposed KHCM nighttime facility is compliant with current Commission allocation standards.

FAA NOTIFICATION

Since KHCM is proposing to utilize an existing tower without physical alteration, notification to the Federal Aviation Administration is not necessary.

The proposed antenna is an existing structure and less than 60 meters; therefore Tower Registration is not necessary.

ENVIRONMENTAL CONSIDERATIONS

This engineering statement only certifies compliance with human exposure to radio-frequency radiation.

The proposal described herein does not involve high-intensity lighting as specified in Section 1.1307(a)(8) of the Rules, nor will it result in human exposure to radio-frequency radiation in excess of the standards specified in Section 1.1307(b).

RADIO-FREQUENCY IMPACT

On January 1, 1986, the FCC amended its Rules to implement the National Environmental Policy Act of 1969 (NEPA). This amendment established RF radiation protection guidelines to be used to determine if potentially harmful RF exposure is possible from an FCC-regulated transmission facility. Effective October 15, 1997, the FCC adopted revised guidelines and procedures for evaluating environmental effects of RF emissions. These revised guidelines incorporate two tiers of exposure limits based on whether exposure occurs in a “controlled” (occupational) situation or an “uncontrolled” (general population) situation. The FCC has also revised OET Bulletin No. 65 entitled, “Evaluating Compliance with FCC Guidelines for Human Exposure to Radio-frequency Electromagnetic Fields,” to aid in the radiation exposure analysis. This bulletin, as well as other current literature, provides detailed information for conducting an analysis including mathematical equations that can be used to determine compliance with the Commission’s guidelines.

The proposed KHCM facility will be co-located with the 1370 kHz operation of KUPA, Pearl City, Hawaii. Thus, the proposed site is considered a multiple use site.

CALCULATION METHODS

Verification of compliance with FCC-Specified guidelines for human exposure to RF radiation was obtained from OET Bulletin No. 65. The proposed KHCM facility will operate on 1180 kHz with a worst-case power of 1.0 kW. To obtain distance to compliance with the guidelines, Table 1, Section 1 of Supplement A was used. Radio Station KUPA is licensed

to operate on 1370 kHz with a power of 6.2 kW. Table 2, Section 1 of Supplement A was used for KUPA. To comply with FCC limits, the minimum fencing requirement is 3.0 meters and 2.0 meters for KHCM, and KUPA, respectively.

A fence of at least 5.0 meters (16.4 feet) from the base of the tower will be constructed. The fencing of 5.0 meters will satisfy both the occupational/controlled and general population/uncontrolled MPE limits. The fence will be locked to preclude public access to the tower, and appropriate warning signs will also be posted. If requested by the Commission, the applicant will conduct electromagnetic field strength measurements to establish that the MPE limits specified by the FCC are not exceeded.

It is submitted that the proposed frequency change of KHCM to the KUPA system will not constitute a potential hazard to the quality of the human environment. Accordingly, the KHCM proposal, as described herein, should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Rules.

OCCUPATIONAL SAFETY

Access to the KHCM/KUPA antenna supporting tower base will be restricted to authorized maintenance personnel only. To ensure protection of station personnel or tower contractors working in the vicinity of the tower, the stations will reduce power or cease operation during times of service or maintenance of the transmission systems when necessary to avoid potentially harmful exposure to personnel. Joint procedures will be

followed by both stations during times of service or maintenance of the transmission systems.

In light of the above, the proposed facility should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Commission's Rules.

CONCLUSION

It is submitted that the proposed technical facilities described herein comply with the technical standards of the Commission's Rules and Regulations. This statement, Section III-A of FCC Form 301, and the attached exhibits were prepared by me or under my direct supervision, and are believed to be true and correct, under penalty of perjury.

Dated: February 16, 2006

Cynthia M. Jacobson, P.E.

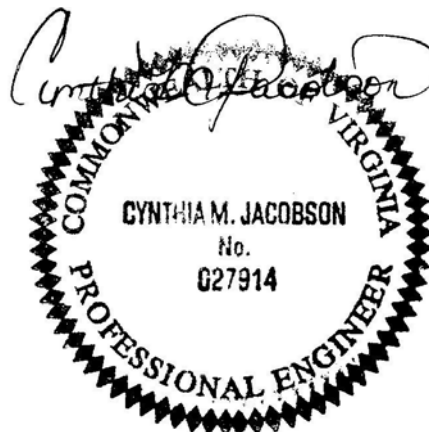
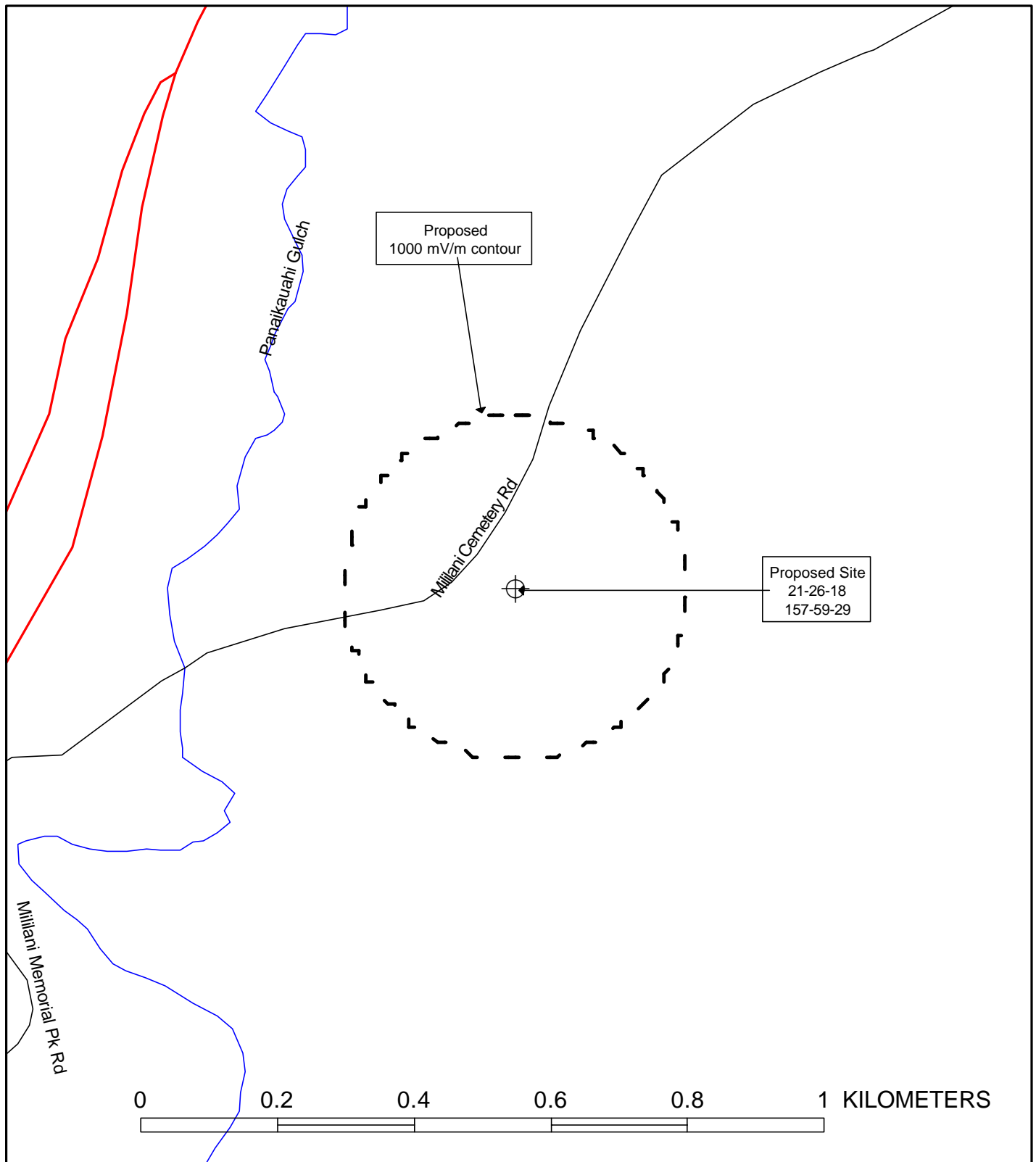
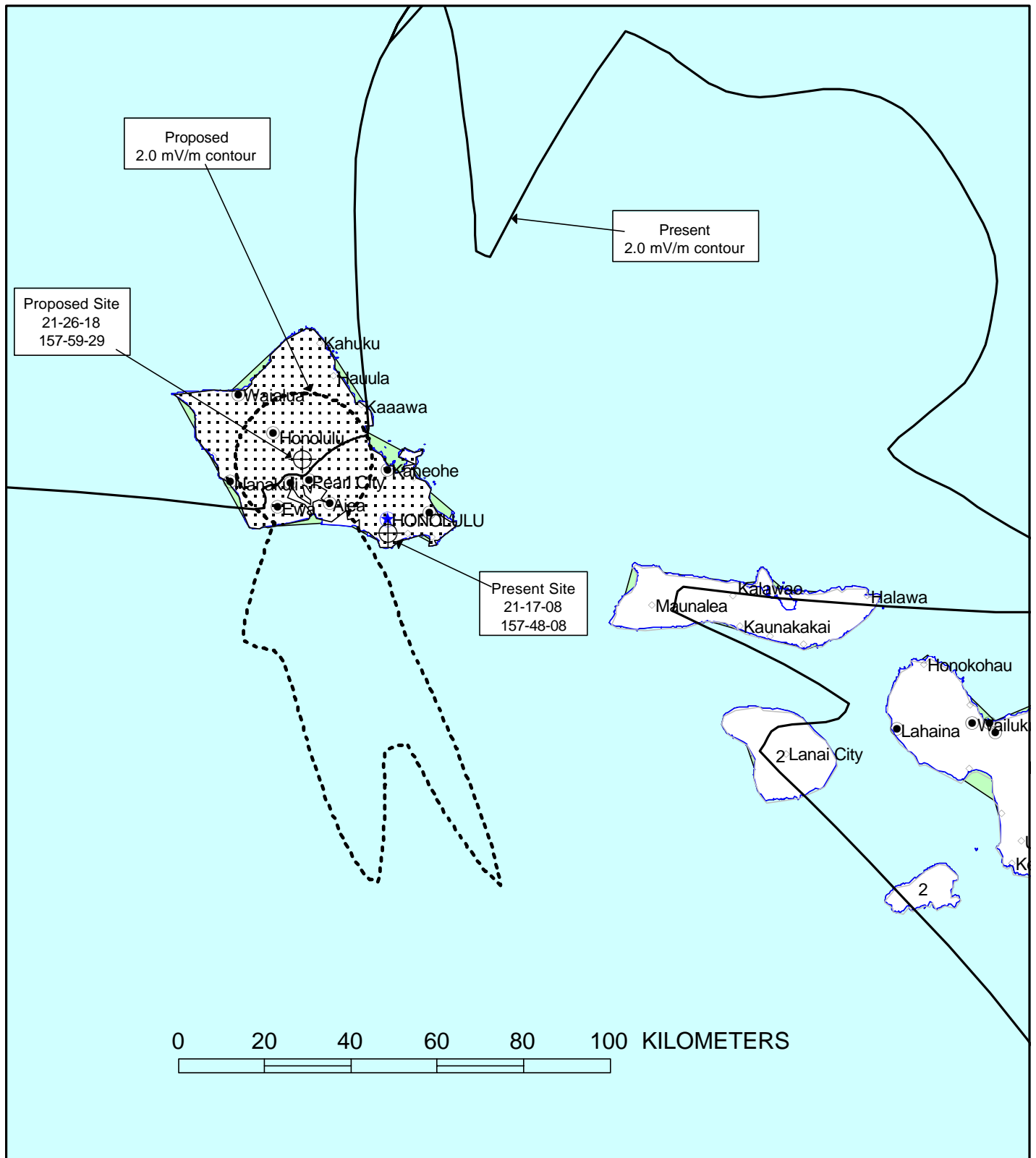


FIGURE 1



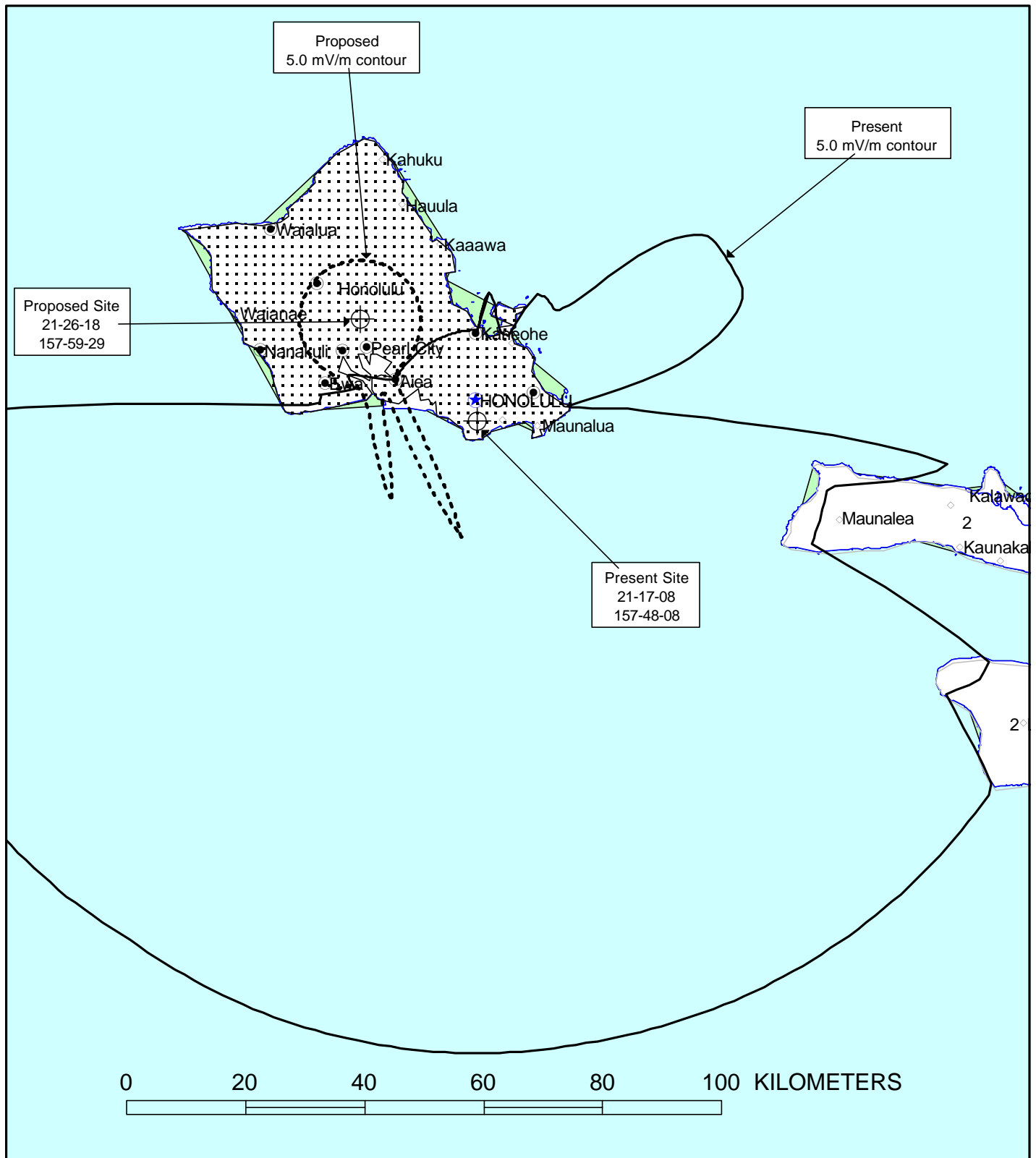
PROPOSED 1000 MV/M CONTOUR
KHCM(AM) - HONOLULU, HAWAII
PRESENT: 1170 KHZ - 5.0 KW - ND-U
PROPOSED: 1180 KHZ - 1.0 KW - ND-U
FEBRUARY, 2006

FIGURE 2



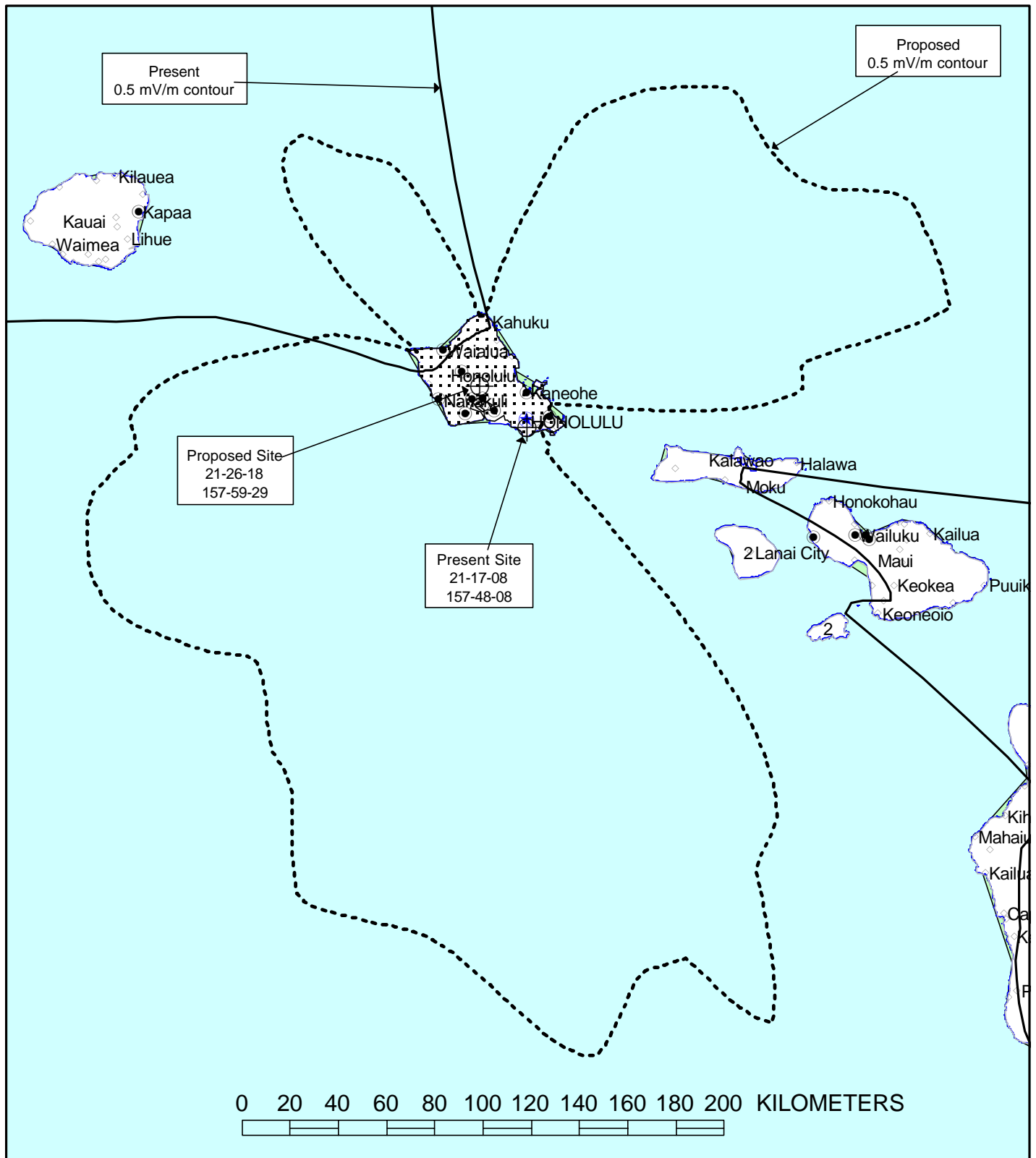
PRESENT & PROPOSED 2 MV/M CONTOURS
 KHCM(AM) - HONOLULU, HAWAII
 PRESENT: 1170 KHZ - 5.0 KW - ND-U
 PROPOSED: 1180 KHZ - 1.0 KW - ND-U
 FEBRUARY, 2006

FIGURE 3



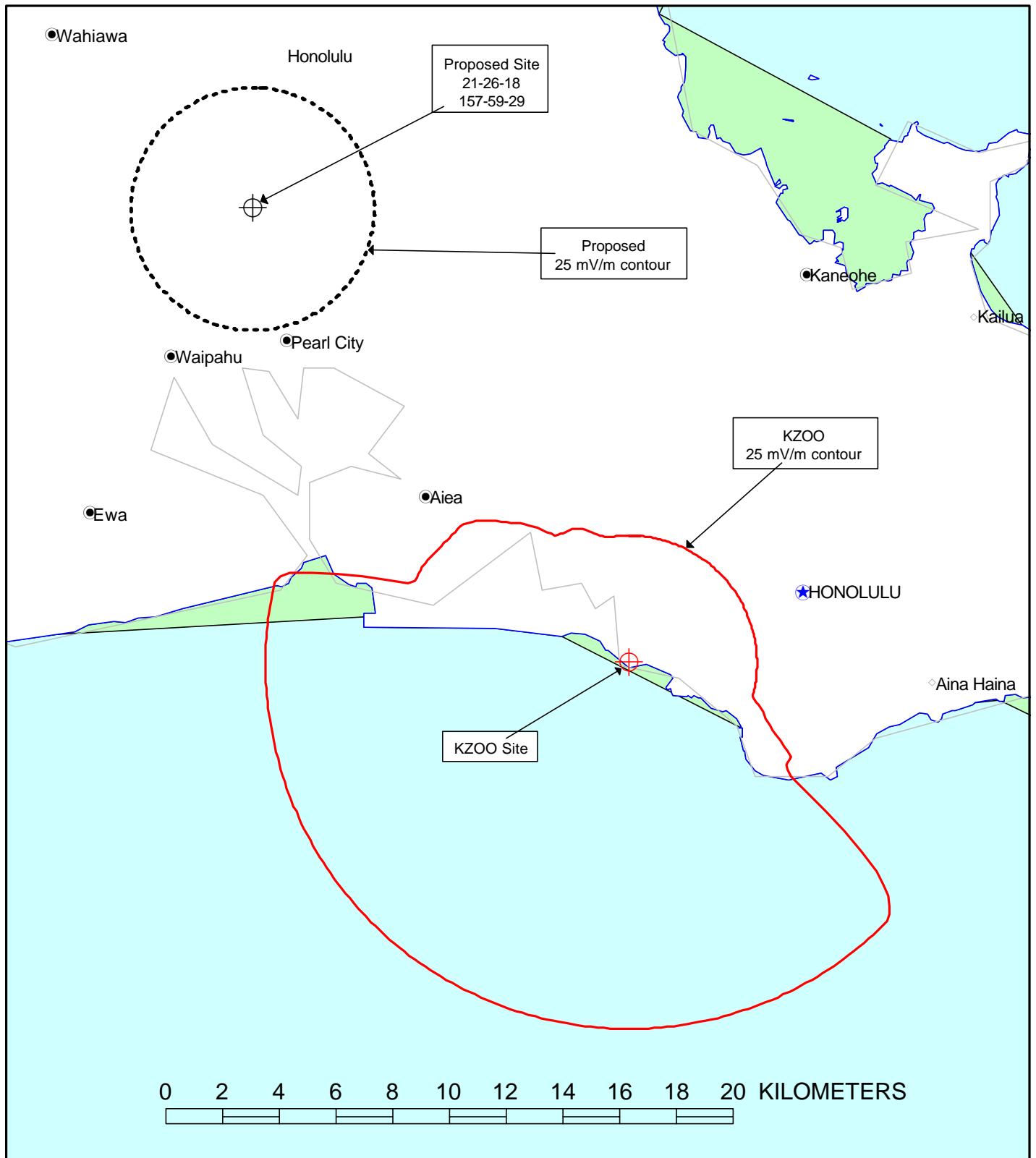
PRESENT & PROPOSED 5 MV/M CONTOURS
 KHCM(AM) - HONOLULU, HAWAII
 PRESENT: 1170 KHZ - 5.0 KW - ND-U
 PROPOSED: 1180 KHZ - 1.0 KW - ND-U
 FEBRUARY, 2006

FIGURE 4



PRESENT & PROPOSED 0.5 MV/M CONTOURS
 KHCMA(M) - HONOLULU, HAWAII
 PRESENT: 1170 KHZ - 5.0 KW - ND-U
 PROPOSED: 1180 KHZ - 1.0 KW - ND-U
 FEBRUARY, 2006

FIGURE 5



DAYTIME ALLOCATION STUDY
 KHCM(AM) - HONOLULU, HAWAII
 PRESENT: 1170 KHZ - 5.0 KW - ND-U
 PROPOSED: 1180 KHZ - 1.0 KW - ND-U
 FEBRUARY, 2006

Frequency: 1180

Explanation of "CODE" which appears on the right edge of this report:

```

CODE
123456
|||||-- [6] Corresponding expanded band domestic status (if
|||||      this is a lower band station)
|||||--- [5] Not included in RSS Calculation because:
|||||      (1) Deleted Domestically
|||||      (2) Application
|||||      (3) Petition for Expanded Band
|||||      (4) Objected
|||||      (5) B-List or D-List
|||||      (6) Class D station (formally 2S or 3S)
|||||      (7) Cuban Operation
|||||      (8) Multiple Entry
|||||      (9) Test record
|||||---- [4] FCC Dummy Data Code
|||||      (B) Some data assumed; (V) Vertical antenna parameters assumed;
|||||      (1) Vertical and horizontal antenna parameters assumed;
|||||      (2) Coordinates are assumed
|||||----- [3] FCC Bad Record Code
|||||      (B) Some data known to be bad; (V) Bad vertical antenna parameters;
|||||      (1) Bad coordinates; (2) Bad horizontal antenna parameters;
|||||      (3) Bad horizontal and vertical antenna parameters
|||||----- [2] IFRB Notified Status
|||||      (A) Negotiated Priority; (P) Proposed; (T) Informal Proposal
|||||      (O) Operating; (U) Un-notified; (Z) Test Record
|----- [1] Domestic Status
|      (C) Construction Permit; (L) License; (A) Application;
|      (D) Deleted; (M) Petition for Expanded Band;
|      (P) Planned expanded band; (T) Test;
|      (S) Petition for expanded band w/ stereo

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KHCMPRO 1180 kHz HONOLULU, HI US -
N 21-26-18 W 157-59-29
PROPOSED STATION

1.0000 kW 297.50 mV/m @ km
Hours: Mode: ND

No.	Field	Phase	Spacing	Orient	Height	Ref Top/SW	A	B	C	D
1	1.0000000	.0000	.0000	.0000	77.00	0 0	.00	.00	.00	.00

SUMMARY OF LIMITS TO KHCM 1180 kHz HONOLULU, HI US 1.0000 kW 297.50 mV/m @ km Dom Cl: Dom Stat:
N 21-26-18 W 157-59-29 E(Nom): .0000 Hours: Mode: ND Reg2 Cl: Not stat:

Call	City	St Co	Latitude (D-M-S)	Longitude (D-M-S)	Az (Deg)	Dist (km)	Min/Max (Deg)(Deg)	E(Hor) (mV/m)	E(Vert) (mV/m)	E(Sky) (mV/m)	Limit (mV/m)	RSS (mV/m)	Code
KERI	WASCO-GREENACRE	CA US	N 35-34-17	W 119-19-26	257.82	4059.6	.00/.00	1485.58	1485.58	.0052707	1.5660	1.566	LO
NEW	JACKSONVILLE	OR US	N 42-17-44	W 122-48-15	245.75	4006.9	.00/.00	1487.32	1487.32	.0048726	1.4494		AP 2
NEW	JACKSONVILLE	OR US	N 42-17-44	W 122-48-15	245.75	4006.9	.00/.00	1487.32	1487.32	.0048726	1.4494		AP 2
NEW	JACKSONVILLE	OR US	N 42-17-44	W 122-48-15	245.75	4006.9	.00/.00	1487.32	1487.32	.0048726	1.4494		AP 2
- KHCM	HONOLULU	HI US	N 21-17-08	W 157-48-08	310.97	25.9	79.73/83.75	630.57	86.67	.5160155	.8944		LO
50% Exclusion													
CB 118	SANTIAGO 6	CI	S 33-21-00	W 070-40-00	289.50	11061.3	.00/.00	2675.13	2675.13	.0012194	.6524	1.696	O
NEW	RENO	NV US	N 39-33-43	W 119-40-39	252.37	4143.8	.00/.00	667.98	667.98	.0047077	.6289		AP 2
KOFI	KALISPELL	MT US	N 48-11-52	W 114-15-03	248.18	4879.9	.00/.00	1024.79	1024.79	.0025967	.5322	1.778	LO
NEW	TRUCKEE	CA US	N 39-19-51	W 120-10-36	252.19	4095.1	.00/.00	464.82	464.82	.0048588	.4517		AP 2
KGOL	HUMBLE	TX US	N 30-08-21	W 095-17-24	277.01	6276.7	.00/.00	1152.42	1152.42	.0019414	.4475		AP 2
25% Exclusion													
NEW	MEDFORD	OR US	N 42-18-00	W 122-49-00	245.73	4006.1	.00/.00	421.77	421.77	.0048744	.4112		P
TGT	SONORA	GT	N 14-32-00	W 090-37-00	287.08	7116.6	.00/.00	978.60	978.60	.0020102	.3934		O 5
+ KEX	PORTLAND	OR US	N 45-25-20	W 122-33-57	242.26	4176.5	.00/.00	4396.75	4396.75	.0041835	.3679		LO
XEFR1	MAGDALENA MIXHU	DF MX	N 19-24-04	W 099-04-56	283.07	6106.3	.00/.00	665.97	665.97	.0026949	.3589		P 4
KLAY	LAKEWOOD	WA US	N 47-09-00	W 122-24-38	240.50	4279.0	.00/.00	455.52	455.52	.0038186	.3479		LO
HJGK	BUARAMANGA	CO	N 7-05-00	W 073-07-00	290.82	9192.5	.00/.00	1383.99	1383.99	.0011629	.3219		O
WHAM	ROCHESTER	NY US	N 43-04-55	W 077-43-30	279.86	7629.9	.00/.00	2662.89	2662.89	.0006002	.3196		LO

SUMMARY OF LIMITS TO KHCM 1180 kHz HONOLULU, HI US 4.5000 kW 297.50 mV/m @ km Dom Cl: B Dom Stat: A
N 21-26-18 W 157-59-29 E(Nom): .0000 Hours: N Mode: ND2 Reg2 Cl: B Not stat: P

Call	City	St Co	Latitude (D-M-S)	Longitude (D-M-S)	Az (Deg)	Dist (km)	Min/Max (Deg)(Deg)	E(Hor) (mV/m)	E(Vert) (mV/m)	E(Sky) (mV/m)	Limit (mV/m)	RSS (mV/m)	Code
KERI	WASCO-GREENACRE	CA US	N 35-34-17	W 119-19-26	257.82	4059.6	.00/.00	1485.58	1485.58	.0052707	1.5660	1.566	LO
NEW	JACKSONVILLE	OR US	N 42-17-44	W 122-48-15	245.75	4006.9	.00/.00	1487.32	1487.32	.0048726	1.4494		AP 2
NEW	JACKSONVILLE	OR US	N 42-17-44	W 122-48-15	245.75	4006.9	.00/.00	1487.32	1487.32	.0048726	1.4494		AP 2
NEW	JACKSONVILLE	OR US	N 42-17-44	W 122-48-15	245.75	4006.9	.00/.00	1487.32	1487.32	.0048726	1.4494		AP 2
- KHCM	HONOLULU	HI US	N 21-17-08	W 157-48-08	310.97	25.9	79.73/83.75	630.57	86.67	.5160155	.8944		LO
50% Exclusion													
CB 118	SANTIAGO 6	CI	S 33-21-00	W 070-40-00	289.50	11061.3	.00/.00	2675.13	2675.13	.0012194	.6524	1.696	O
NEW	RENO	NV US	N 39-33-43	W 119-40-39	252.37	4143.8	.00/.00	667.98	667.98	.0047077	.6289		AP 2
KOFI	KALISPELL	MT US	N 48-11-52	W 114-15-03	248.18	4879.9	.00/.00	1024.79	1024.79	.0025967	.5322	1.778	LO
NEW	TRUCKEE	CA US	N 39-19-51	W 120-10-36	252.19	4095.1	.00/.00	464.82	464.82	.0048588	.4517		AP 2
KGOL	HUMBLE	TX US	N 30-08-21	W 095-17-24	277.01	6276.7	.00/.00	1152.42	1152.42	.0019414	.4475		AP 2
25% Exclusion													
NEW	MEDFORD	OR US	N 42-18-00	W 122-49-00	245.73	4006.1	.00/.00	421.77	421.77	.0048744	.4112		P
TGT	SONORA	GT	N 14-32-00	W 090-37-00	287.08	7116.6	.00/.00	978.60	978.60	.0020102	.3934		O 5
+ KEX	PORTLAND	OR US	N 45-25-20	W 122-33-57	242.26	4176.5	.00/.00	4396.75	4396.75	.0041835	.3679		LO
XEFR1	MAGDALENA MIXHU	DF MX	N 19-24-04	W 099-04-56	283.07	6106.3	.00/.00	665.97	665.97	.0026949	.3589		P 4
KLAY	LAKEWOOD	WA US	N 47-09-00	W 122-24-38	240.50	4279.0	.00/.00	455.52	455.52	.0038186	.3479		LO
HJGK	BUARAMANGA	CO	N 7-05-00	W 073-07-00	290.82	9192.5	.00/.00	1383.99	1383.99	.0011629	.3219		O
WHAM	ROCHESTER	NY US	N 43-04-55	W 077-43-30	279.86	7629.9	.00/.00	2662.89	2662.89	.0006002	.3196		LO
HJOV	NEIVA 4	CO	N 2-52-00	W 075-20-00	291.25	9131.5	.00/.00	1198.49	1198.49	.0013168	.3156		O 5
TIQ	LIMON	CS	N 10-00-00	W 083-02-00	289.48	8057.2	.00/.00	978.60	978.60	.0015877	.3107		O
HCLR1	QUITO	EC	S 0-11-00	W 078-28-00	291.80	8931.7	.00/.00	978.60	978.60	.0014880	.2912		O 5
HJTT	VDEL RIO BLA	CO	N 4-26-04	W 075-14-06	291.05	9078.7	.00/.00	978.60	978.60	.0012910	.2527		O 5
CMGL	S SPIRITUS	CU	N 21-54-00	W 079-26-00	286.50	8015.2	.00/.00	978.60	978.60	.0011425	.2236		O 7

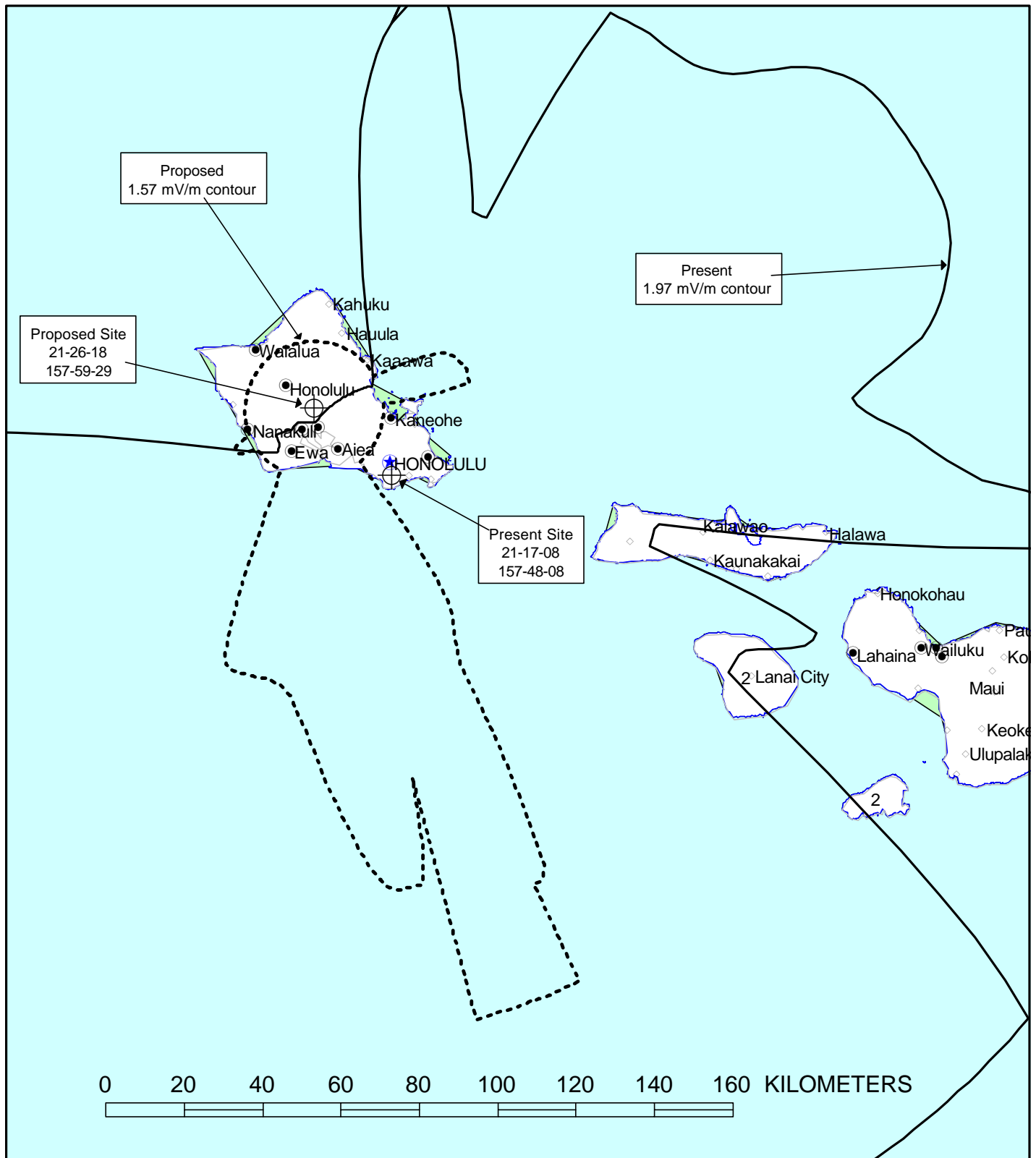
SUMMARY OF LIMITS TO KHCM 1170 kHz HONOLULU, HI US 5.0000 kW 282.00 mV/m @ km Dom Cl: B Dom Stat: L
N 21-17-08 W 157-48-08 E(Nom): .0000 Hours: U Mode: ND1 Reg2 Cl: B Not stat: O

Call	City	St Co	Latitude (D-M-S)	Longitude (D-M-S)	Az (Deg)	Dist (km)	Min/Max (Deg)(Deg)	E(Hor) (mV/m)	E(Vert) (mV/m)	E(Sky) (mV/m)	Limit (mV/m)	RSS (mV/m)	Code 123456
KFAQ	TULSA	OK US	N 36-08-49	W 095-48-27	272.44	6163.4	.00/.00	4275.53	4275.53	.0017346	1.4833	1.483	LO
KLOK	SAN JOSE	CA US	N 37-18-41	W 121-48-58	252.91	3885.7	.00/.00	1149.48	1149.48	.0056683	1.3031	1.974	LO
50% Exclusion													
KCBQ	SAN DIEGO	CA US	N 32-53-42	W 116-55-31	262.73	4218.0	.00/.00	1019.17	1019.17	.0050620	1.0318		AP 2
+ KHCM	HONOLULU	HI US	N 21-26-18	W 157-59-29	130.90	25.9	79.73/83.75	631.09	95.59	.5160155	.9865		AP 2
KJNP	NORTH POLE	AK US	N 64-45-34	W 147-19-26	194.11	4895.1	.00/.00	1747.84	1747.84	.0022113	.7730	2.120	LO
KPUG	BELLINGHAM	WA US	N 48-46-34	W 122-26-21	238.36	4370.4	.00/.00	1025.49	1025.49	.0035251	.7230	2.240	LO
25% Exclusion													
NEW	BEND	OR US	N 44-04-47	W 121-16-59	244.87	4199.8	.00/.00	608.99	608.99	.0042333	.5156		CP
+ KHCMPRO	HONOLULU	HI US	N 21-26-18	W 157-59-29	130.90	25.9	79.73/83.75	297.50	45.06	.5160155	.4651		PRO
KCBQ	SAN DIEGO	CA US	N 32-50-23	W 116-59-31	262.75	4211.0	.00/.00	387.95	387.95	.0050853	.3946		LO
HCJM4	ESMERALDAS	EC	N 0-56-05	W 079-41-17	291.54	8738.9	.00/.00	978.69	978.69	.0015456	.3025		O
TGRL	LANDIVAR	GT	N 14-49-00	W 091-30-00	286.65	6999.0	.00/.00	692.00	692.00	.0020925	.2896		O 5
YSVE	SAN SALVADOR	ES	N 13-43-00	W 089-04-00	287.42	7285.5	.00/.00	692.00	692.00	.0019265	.2666		O 5
ZYJ-273	CURITIBA	BR	S 25-27-00	W 049-16-00	282.79	12793.3	.00/.00	1537.17	1537.17	.0008614	.2648		O
HJDT	MEDELLIN 9	CO	N 6-18-00	W 075-35-00	290.60	8950.0	.00/.00	978.60	978.60	.0012891	.2523		O
HJNW	CARTAGENA 5	CO	N 10-27-00	W 075-32-00	289.90	8795.4	.00/.00	978.60	978.60	.0012167	.2381		O 5
HJGA	TUNJA 1	CO	N 5-34-00	W 073-21-00	290.81	9209.9	.00/.00	978.60	978.60	.0012071	.2363		O
XEUVA	AGUASCALIENTES	AG MX	N 21-53-04	W 102-19-56	280.34	5702.9	.00/.00	362.66	362.66	.0030451	.2209		O 4
NEW	VERADALE	WA US	N 47-36-59	W 117-12-55	245.37	4651.2	.00/.00	362.83	362.83	.0030318	.2200		AP 2
CMNW	PILON 1	CU	N 19-53-00	W 077-20-00	287.45	8275.3	.00/.00	978.60	978.60	.0011015	.2156		O 7

SUMMARY OF LIMITS TO NEW 1170 kHz AGANA, GU US .2500 kW 285.00 mV/m @ km Dom Cl: B Dom Stat: A
N 13-27-24 E 114-40-20 E(Nom): .0000 Hours: N Mode: ND2 Reg2 Cl: B Not stat: P

Call	City	St Co	Latitude (D-M-S)	Longitude (D-M-S)	Az (Deg)	Dist (km)	Min/Max (Deg)(Deg)	E(Hor) (mV/m)	E(Vert) (mV/m)	E(Sky) (mV/m)	Limit (mV/m)	RSS (mV/m)	Code 123456
NEW	AGANA	GU US	N 13-27-27	E 144-42-12	273.57	3245.6	.00/.00	148.65	148.65	.0124495	.3701		AP 2
KHCM	HONOLULU	HI US	N 21-17-08	W 157-48-08	78.28	9218.1	.00/.00	630.57	630.57	.0009458	.1193	.119	LO
50% Exclusion													
25% Exclusion													
ZYJ-598	MOSSORO	BR	S 5-12-00	W 037-20-00	71.37	16812.7	.00/.00	309.50	309.50	.0004018	.0249		O
ZYK-569	CAMPINAS	BR	S 22-53-00	W 047-04-00	115.41	17822.7	.00/.00	692.00	692.00	.0001662	.0230		O
ZYJ-273	CURITIBA	BR	S 25-27-00	W 049-16-00	125.44	17870.8	.00/.00	1520.55	1520.55	.0000690	.0210		O
OCX4Y	COOP SATIPO	PE	S 11-35-00	W 074-40-00	77.40	18980.3	.00/.00	358.40	358.40	.0002910	.0209		O
+ KHCM	HONOLULU	HI US	N 21-26-18	W 157-59-29	78.36	9195.4	.00/.00	631.09	631.09	.0009502	.0120		AP 2
	SENHOR BONFI	BR	S 10-28-00	W 040-11-00	80.53	17261.0	.00/.00	140.50	140.50	.0004248	.0119		P
	EXU	BR	S 7-31-00	W 039-43-00	74.58	17140.1	.00/.00	141.50	141.50	.0004050	.0115		P
ZYI-473	STA C CABRAL	BR	S 16-21-00	W 039-02-00	92.94	17173.4	.00/.00	140.00	140.00	.0004048	.0113		O
	PARAMBU	BR	S 6-13-00	W 040-42-00	71.50	17201.8	.00/.00	140.00	140.00	.0003769	.0106		P
	NAZARE PIAVI	BR	S 6-58-00	W 042-40-00	71.95	17434.2	.00/.00	141.00	141.00	.0003658	.0103		P
	GUARAI	BR	S 8-58-00	W 048-13-00	73.46	18083.9	.00/.00	152.00	152.00	.0003379	.0103		P
ZYL327	IPATINGA	BR	S 19-30-00	W 042-32-00	101.98	17496.0	.00/.00	147.42	147.42	.0003180	.0094		O
ZYL336	ARAXA	BR	S 19-37-00	W 046-54-00	106.41	17936.6	.00/.00	140.00	140.00	.0002649	.0074		O
- ZYI-202	VITORIA 2	BR	S 20-17-00	W 040-20-00	101.99	17252.9	.00/.00	978.60	978.60	.0003229	.0063		O
KJNP	NORTH POLE	AK US	N 64-45-34	W 147-19-26	77.04	9030.6	.00/.00	1747.84	1747.84	.0000179	.0063		LO
ZYL234	FRONTEIRA	BR	S 20-16-00	W 049-13-00	111.32	18142.5	.00/.00	145.77	145.77	.0002109	.0061		O
+ KHCMPRO	HONOLULU	HI US	N 21-26-18	W 157-59-29	78.36	9195.4	.00/.00	297.50	297.50	.0009502	.0057		PRO
HCAH3	TREBOL	EC	S 3-39-00	W 079-36-00	54.31	18105.9	.00/.00	309.50	309.50	.0000828	.0051		O
- OAX4C	ONCE SESENTA	PE	S 12-13-00	W 077-04-00	82.53	18735.1	.00/.00	692.00	692.00	.0003280	.0045		O

FIGURE 7



PRESENT & PROPOSED NIGHTTIME INTERFERENCE-FREE CONTOURS
 KHCM(AM) - HONOLULU, HAWAII
 PRESENT: 1170 KHZ - 5.0 KW - ND-U
 PROPOSED: 1180 KHZ - 1.0 KW - ND-U
 FEBRUARY, 2006