

TECHNICAL EXHIBIT
APPLICATION FOR MODIFICATION OF
LICENSED FACILITY
(FCC FILE NO. BLTTA-20030813AAN)
CLASS A STATION KHMM-CA
FACILITY ID 18745
HANFORD, CALIFORNIA
CH 14 2 KW (MAX-DA)

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of a modification of the licensed facility for Class A station KHMM-CA at Hanford, California (Facility ID: 18745; File No. BLTTA-20030813AAN). The purpose of this application is to change carrier offset from minus (-) to zero (z). No other changes are proposed, including no change in channel (14), transmitter site, radiation center above mean sea level (RCAMSL), effective radiated power (ERP), or community of license (Hanford). The instant application is considered a "minor change" in facilities pursuant to Section 73.3572.

Freeze Compliance

This application can be accepted for filing as it does not request a change which is considered "frozen" by the FCC's Public Notice (DA 04-2446) released August 3, 2004, *Freeze on the Filing of Certain TV and DTV Requests for Allotment or Service Area Changes*. Specifically, the proposed facilities will not result in an extension of the 74 dBu contour (see below).

Proposed Facilities

It is proposed to operate KHMM-CA on channel 14 (470-476 MHz) with a "zero" carrier frequency offset using an Antenna Concepts ACB24DR directional antenna oriented at 230 degrees true. The maximum ERP will be 2 kW towards the radio horizon and 89.1 kW at any horizontal or vertical angle. The

antenna radiation center height above mean sea level will remain at 1384 meters.

Response to Paragraph 11(a) - TV Broadcast Analog Protection

A study has been conducted using the provisions of Section 74.705 which indicates that the proposed KHMM-CA operation will not create prohibited interference to other existing, authorized or proposed NTSC full-power stations with the exceptions of KDTV on channel 14 at San Francisco, California (BLCT-19990625KG) and KFTV on channel 21 at Hanford, California (BLCT-19971110KG). However, based on the provisions of the OET-69 Bulletin as permitted by FCC rules [Section 74.705(e)], it is believed that KHMM-CA's proposed operation complies with the FCC's interference criteria towards KDTV and KFTV. Specifically, calculations have been made using the procedures outlined in the FCC's OET-69 Bulletin and a 2 square kilometer grid. The results indicate that the proposal complies with the FCC's 0.5% interference threshold towards KDTV and KFTV.¹

Response to Paragraph 11(b) - DTV Station Protection

Calculations based on OET Bulletin No. 69 indicate that the proposed KHMM-CA operation on channel 14 complies with the FCC's 0.5% interference threshold criteria to all allotted, proposed or actual DTV operating facilities on channels 14 and 15.

Response to Paragraph 11(c) - LPTV/TV Translator, Class A Station Protection

A study has been conducted which indicates that the KHMM-CA proposal will not create prohibited interference to

¹ The du Treil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 2 km was employed. An Sun based processor computer system was employed. The results have been found to be in very close agreement with the results of the FCC implementation of OET Bulletin No. 69.

other existing, authorized or proposed LPTV, TV Translator and Class A stations.

Response to Paragraph 11(d) - Land Mobile Station Protection

The proposed KHMM-CA operation complies with the FCC's interference requirements to all pertinent land mobile radio service (LMRS) stations.

Environmental Considerations

The proposed KHMM-CA television facilities were evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation". The calculated power density at the base of the tower was calculated using the appropriate equation of the Bulletin.

Using a worst-case vertical relative field value of 0.2 towards the tower base (see vertical plane relative field pattern attached as Figure 1), a maximum visual effective radiated power of 89.1 kilowatts and 10 percent aural power, the calculated power density at 2 meters above ground level at the base of the tower is 0.2326 milliwatts per square centimeter (mW/cm^2), or 74% percent of the Commission's recommended limit applicable to general population/uncontrolled exposure areas ($0.32 \text{ mW}/\text{cm}^2$ for TV channel 14). Therefore, as the calculated power density is less than 100% of the limit and this is not a multi-user site, the KHMM-CA proposal is believed to be in compliance with the RF emission rules.

Access to the transmitting site will be restricted and appropriately marked with warning signs. Furthermore, procedures will be in effect in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors

or scheduling work when the stations are at reduced power or shut down.



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June 17, 2005

ANTENNA CONCEPTS, INC.

DATE 3/16/93 BEAM TILT 0
ANTENNA GAIN : 24 BAYNULL FILL 0 %

ELEVATION	FIELD	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0
+2.00	0.190	+	+	+	+	+	+	+	+	+	+
+0.00	1.000	+	+	+	+	+	+	+	+	+	+
-2.00	0.190	:	*	+	+	+	+	+	+	+	+
-4.00	0.165	:		*	+	+	+	+	+	+	+
-6.00	0.129	:		*	+	+	+	+	+	+	+
-8.00	0.084	:	*		+	+	+	+	+	+	+
-10.00	0.036	:	*		+	+	+	+	+	+	+
-12.00	0.006	:	*		+	+	+	+	+	+	+
-14.00	0.036	:	*		+	+	+	+	+	+	+
-16.00	0.050	:	*		+	+	+	+	+	+	+
-18.00	0.044	:	*		+	+	+	+	+	+	+
-20.00	0.023	:	*		+	+	+	+	+	+	+
-22.00	0.005	:	*		+	+	+	+	+	+	+
-24.00	0.029	:	*		+	+	+	+	+	+	+
-26.00	0.036	:	*		+	+	+	+	+	+	+
-28.00	0.023	:	*		+	+	+	+	+	+	+
-30.00	0.004	:	*		+	+	+	+	+	+	+
-32.00	0.028	:	*		+	+	+	+	+	+	+
-34.00	0.030	:	*		+	+	+	+	+	+	+
-36.00	0.006	:	*		+	+	+	+	+	+	+
-38.00	0.024	:	*		+	+	+	+	+	+	+
-40.00	0.029	:	*		+	+	+	+	+	+	+
-42.00	0.000	:	*		+	+	+	+	+	+	+
-44.00	0.030	:	*		+	+	+	+	+	+	+
-46.00	0.019	:	*		+	+	+	+	+	+	+
-48.00	0.022	:	*		+	+	+	+	+	+	+
-50.00	0.029	:	*		+	+	+	+	+	+	+
-52.00	0.016	:	*		+	+	+	+	+	+	+
-54.00	0.032	:	*		+	+	+	+	+	+	+
-56.00	0.020	:	*		+	+	+	+	+	+	+
-58.00	0.031	:	*		+	+	+	+	+	+	+
-60.00	0.033	:	*		+	+	+	+	+	+	+
-62.00	0.016	:	*		+	+	+	+	+	+	+
-64.00	0.048	:	*		+	+	+	+	+	+	+
-66.00	0.024	:	*		+	+	+	+	+	+	+
-68.00	0.030	:	*		+	+	+	+	+	+	+
-70.00	0.063	:	*		+	+	+	+	+	+	+
-72.00	0.051	:	*		+	+	+	+	+	+	+
-74.00	0.003	:	*		+	+	+	+	+	+	+
-76.00	0.058	:	*		+	+	+	+	+	+	+
-78.00	0.109	:	*		+	+	+	+	+	+	+
-80.00	0.142	:	*		+	+	+	+	+	+	+
-82.00	0.156	:	*		+	+	+	+	+	+	+
-84.00	0.156	:	*		+	+	+	+	+	+	+
-86.00	0.148	:	*		+	+	+	+	+	+	+
-88.00	0.136	:	*		+	+	+	+	+	+	+
-90.00	0.124	:									