

TECHNICAL EXHIBIT  
APPLICATION FOR CONSTRUCTION PERMIT  
LOW POWER TV STATION KTMF-LP  
KALISPELL, MONTANA

June 24, 2002

CHANNEL 42(+) 8.4 KW

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Technical Statement

This Technical Exhibit was prepared in support of a displacement application for Low Power TV (LPTV) station KTMF-LP, Kalispell, Montana (FCC File No. BLTT-19950608IF / Facility ID 14676). The instant application proposes operation on Channel 42(+) with a nominal non-directional peak visual effective radiated power (ERP) of 8.4 kW. There is no change in the facility from what is licensed on Channel 59 except for the channel (to Channel 42). As detailed below, this application requires coordination with Canada.

Proposed Facilities

The proposed facility will operate on Channel 42 (638-644 MHz) with a "plus" carrier frequency offset using a Scala model SL-8 non-directional antenna. The maximum non-directional ERP will be 8.4 kW in any horizontal or vertical angle. The antenna will be mounted on an existing tower located on Lone Pine located near Kalispell, Montana. The overall height of the antenna structure is 43 m AGL (1178.4 m AMSL). The antenna radiation center height above ground will be 33 m, with a radiation center height above mean sea level of 1168 m. The antenna structure is registered with the FCC and bears ASRN 1004480.

Response to Paragraph 13(a) – TV Broadcast Analog Protection

An allocation study has been conducted pursuant to the provisions of Section 74.705 of the FCC Rules. The proposed facility meets the contour overlap and spacing requirements with respect to all pertinent analog TV broadcast facilities.

Response to Paragraph 13(b) – DTV Station Protection

An allocation study has been conducted pursuant to the provisions of Section 74.706 of the FCC Rules. The proposed facility meets the contour overlap requirements with respect to all pertinent digital TV broadcast facilities.

Response to Paragraph 13(c) – LPTV/TV Translator/Class A TV Protection

An allocation study has been conducted pursuant to the provisions of Section 74.707 of the FCC Rules. The proposed facility meets the contour overlap requirements with respect to all pertinent facilities pursuant to Section 74.707 of the FCC Rules.

Canadian Allocation Concerns

The proposed facility is located within the Canadian coordination zone. The transmitter site is located 91.6 km from the Canada border with the United States. According to the Canada/U.S. bilateral agreement concerning the UHF television service,<sup>\*</sup> proposed low-power facilities located more than 32 km from the border, but whose interfering contour falls within Canadian territory, require coordination with Canada. The proposed facility produces a predicting interfering contour over Canadian

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<sup>\*</sup> *Working Arrangement for Allotment and Assignment of VHF and UHF Television Broadcasting Channels Under the Agreement Between the Government of the United States of America and the Government of Canada Relating to the TV Broadcasting Service*, dated March 1, 1989.

territory. Therefore, the proposed low power facility will require coordination with Canada.

An allocation study with respect to Canadian stations reveals the following allocation concerns:

- BC-TV-418, Cranbrook-BC, Channel 42, Class B, analog
- AB-TV-477, Pincher Creek-AB, Channel 42, Class A, analog
- CBRT-5, Rosemary-AB, Channel 42, Class VU, digital
- CKTN-TV, Trail-BC, Channel 42, Class VU, digital

The attached Figure 1 is map showing the predicted 19 dBu f(50,10) and 36 dBu f(50,10) contours for the proposed facility. Also, shown are the protected service areas of the above allotments. As indicated therein, the predicted 19 dBu contour does not overlap the CBRT-5 or CKTN-TV protected service areas, so there is no interference issue with respect to these two facilities.

The predicted KTMF-LP 19 dBu contour does overlap the protected service areas of BC-TV-418 and AB-TV-477. However, considering the use of frequency offset, the predicted 36 dBu f(50,10) contour was calculated for KTMF-LP. As indicated in Figure 1 the 36 dBu contour does not overlap the protected service areas of either BC-TV-418 or AB-TV-477.

Research of the Canadian television database records reveals that BC-TV-418 employs “minus” frequency offset and AB-TV-477 employs “zero” offset. Therefore, with a proposed “plus” frequency offset for KTMF-LP, the facility will be frequency offset to both BC-TV-418 and AB-TV-477. Based on this it is concluded that there is no interference concern with respect to BC-TV-418 and AB-TV-477.

Pursuant to the Canada/U.S. agreement, frequency offset may be implemented through negotiations between the U.S. and Canada. It is requested that the FCC undertake negotiations with Canada to implement the “plus” frequency offset arrangement vis-à-vis the Canadian television allotments.

### Environmental Considerations

With respect to the potential for human exposure to radio frequency (RF) radiation, calculations prepared in accordance with FCC Bulletin OET-65 (Edition 97-01) indicate that the proposal will not result in human exposure to RF radiation at ground level in excess of FCC standards. Power density calculations were conducted at 2-m above ground<sup>†</sup> based on the following conservative assumptions, with the following results:

Call Sign	Channel	Peak Visual ERP or Average ERP (kW)	Aural ERP (kW)	Relative Field Factor <sup>‡</sup>	FCC Limit <sup>§</sup> (mW/cm <sup>2</sup> )	Percentage of Limit
KTMF-LP	42	8.4	0.84	0.30	0.425	3.1%

As indicated above, the exposure to RF radiation at 2-m above ground level will not exceed 3.1% of the FCC limit for general population / uncontrolled exposure. Therefore, the proposal complies with the FCC limits for human exposure to RF radiation and it is categorically excluded from environmental processing. The applicant, in coordination with other users of the transmission facility, shall reduce power or cease operation as

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<sup>†</sup> The radiation center height above ground is 33 m.

<sup>‡</sup> This relative field level is not exceeded for elevation angles greater than 8° below horizontal.

<sup>§</sup> for general population/uncontrolled environments

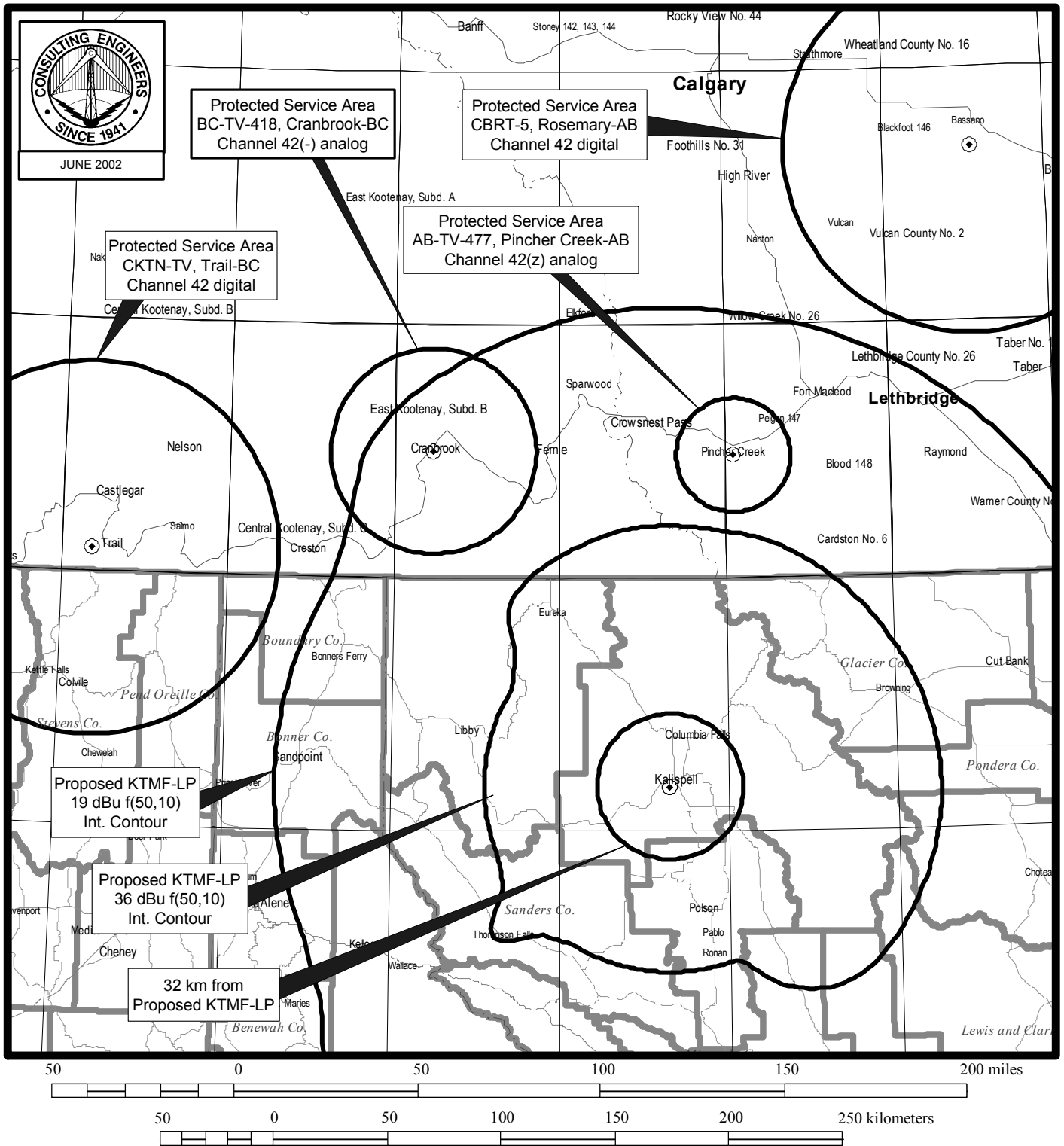
necessary to protect persons having access to the tower or antenna from radio frequency radiation in excess of the FCC guidelines.

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June 24, 2002

Figure 1



## PREDICTED COVERAGE CONTOURS

LOW POWER TV STATION KTMF-LP  
KALISPELL, MONTANA  
CHANNEL 42(+) 8.4 KW

du Treil, Lundin & Rackley, Inc. Sarasota, Florida