

TECHNICAL EXHIBIT  
APPLICATION FOR CONSTRUCTION PERMIT  
NEW FM STATION  
LOCKWOOD, MONTANA  
CH 294C1 100 KW 216 M

Technical Narrative

The applicant was the winning bidder for vacant channel 294A at Lockwood, Montana (MMFM176A). Therefore, pursuant to the FCC Public Notice dated December 1, 2004 and entitled "FM Broadcast Construction Permit Auction Closes" (DA 04-3694), this technical exhibit was prepared in support of a "one-step" upgrade application for construction permit on FCC Form 301 for a new FM station to operate on channel 294C1 at Lockwood, Montana.

Contingent Application

The applicant was also the winning bidder for vacant channel 292C3 at Joliet, Montana (MMFM175C3). Pursuant to the FCC Public Notice dated December 1, 2004 the applicant is also filing a "one-step" upgrade application for construction permit on FCC Form 301 for a new FM station to operate on channel 290C1 at Joliet, Montana. The instant Lockwood channel 294C1 application is being filed under the contingent application rule [Section 73.3517(e)] as grant of this application is contingent on the grant of the "one-step" upgrade application for construction permit for a new FM station to operate on channel 290C1 at Joliet, Montana.

Response to Paragraph 4 - Allotment

It is proposed to upgrade from channel 294A to channel 294C1 at Lockwood, Montana pursuant to the FCC's one-step procedures. Figure 1 is a separation study from the one-step proposal allotment coordinates which are also the proposed transmitter site coordinates. As shown, the allotment coordinates/proposed transmitter site complies with the minimum distance separation requirements of Section 73.207 for Class C1 operation on channel 294 towards all existing, authorized and proposed stations and allotments with the exception of the vacant channel 292C3 allotment at Joliet, Montana. However, as noted above, the applicant was also the winning bidder for

vacant channel 292C3 at Joliet and is also filing a "one-step" upgrade application for construction permit on FCC Form 301 for a new FM station to operate on channel 290C1 at Joliet. Therefore, the instant Lockwood channel 294C1 application is being filed under the contingent application rule [Section 73.3517(e)] as grant of this application is contingent on the grant of the "one-step" upgrade application for construction permit for a new FM station to operate on channel 290C1 at Joliet.

Figure 2 is a map which demonstrates that the allotment coordinates/proposed transmitter site complies with the provisions of Sections 73.203(b) and 73.315. Specifically, Figure 2 depicts the 70 dBu contours based on maximum Class C1 facilities (ERP 100 kW/HAAT 299 meters) and presuming uniform terrain (FCC allotment stage requirement), and based on the proposed facilities (ERP 100 kW/HAAT 216 meters) and actual terrain (FCC application stage requirement). As shown, operation from the proposed site will provide the requisite city grade signal to all of Lockwood. The Lockwood city limits shown on Figure 2 were obtained from a map contained in the 2000 U.S. Census of Population.

#### Response to Paragraph 5 - Antenna Structure Registration

The proposed antenna will be mounted at the 145 meter level on an authorized 158.5 meter tower. The tower registration number is 1016817.

#### Environmental Considerations

The proposed Lockwood channel 294C1 facilities were evaluated in terms of potential radiofrequency radiation exposure at 2 meters above ground level in accordance with the OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation". This Bulletin provides assistance in determining whether FCC-regulated transmitting facilities, operations or devices comply with limits for human exposure to radiofrequency (RF) electromagnetic fields.

The proposed antenna will be mounted at the 145-meter level on the authorized tower structure. The calculated power density at 2 meters above ground level at the base of the tower

was calculated using the appropriate equation contained in the Bulletin. Figure 3 is vertical plane relative field pattern for the proposed ERI 8-bay,  $1/2\text{-}\lambda$  spaced, nondirectional antenna. As shown on Figure 3, the maximum vertical relative field value towards the tower base ( $-60^\circ$  to  $-90^\circ$  elevation) is less than 0.1. Therefore, using a "worst-case" vertical relative field value of 0.1 for the proposed nondirectional antenna, the total ERP of 200 kW (H+V) and an antenna center of radiation height above ground level of 145 meters, the calculated power density at two meters above ground level at the base of the tower is 0.0033 milliwatts per square centimeter ( $\text{mW}/\text{cm}^2$ ), or 1.6 percent of the Commission's recommended limit applicable to general population/uncontrolled exposure areas ( $0.2 \text{ mW}/\text{cm}^2$  for FM channel 294). Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

Access to the tower site will be restricted and appropriately marked with warning signs. Furthermore, as this will be a multi-user site, 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 procedures 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 station is at reduced power or shut down.

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## CDBS FM SEPARATION STUDY

Job Title: Proposed Allotment Coordinates/Proposed Transmitter Site

Separation Buffer: 50 km

Channel: 294 C1

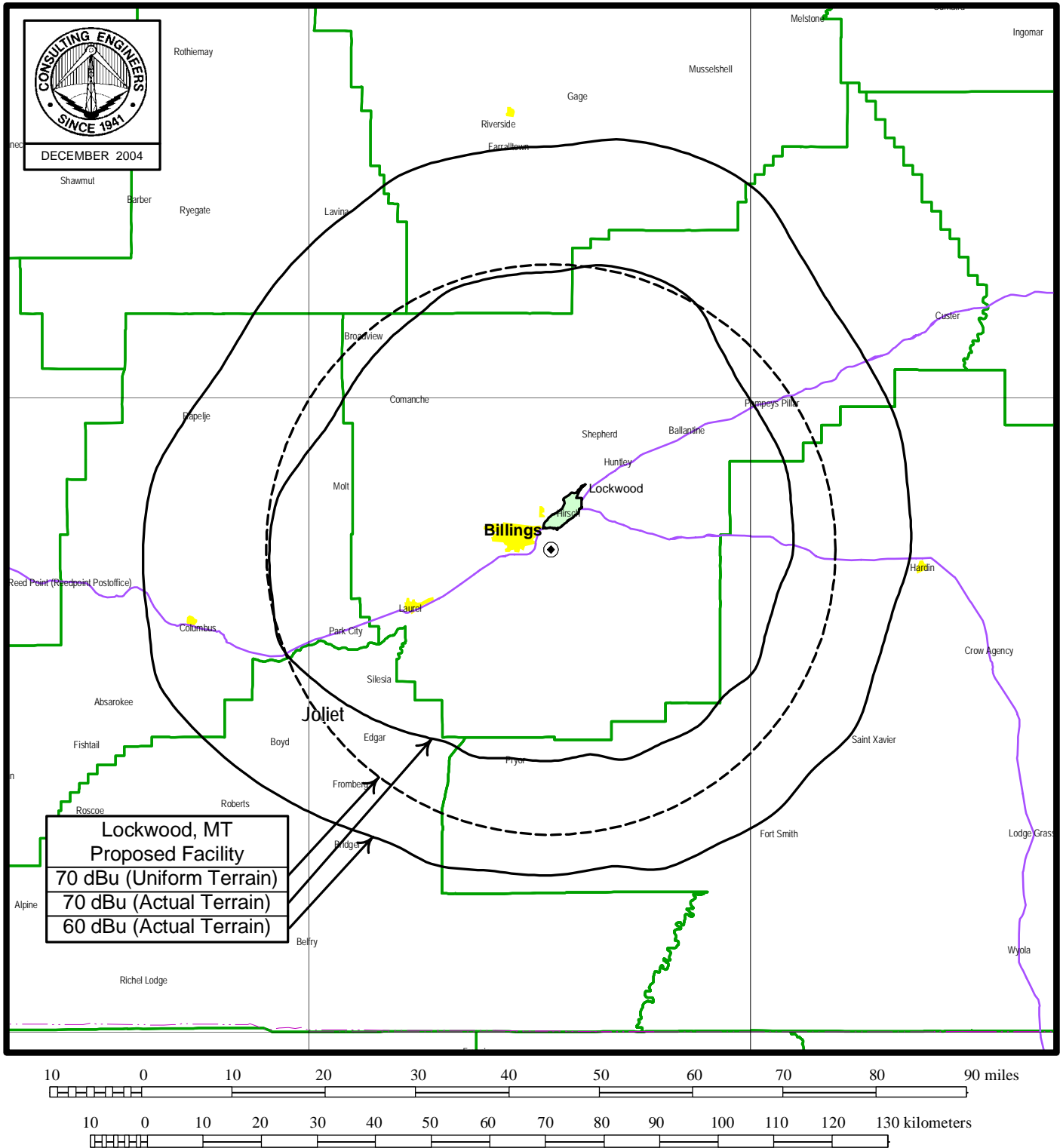
Coordinates: 454536 1082706

Call Id	City St	File Status Num	Channel Freq	ERP HAAT	DA Id	Latitude Longitude	73 215	Bear	Dist. (km)	Req. (km)	215	207
	JOLIET MT	RM VAC C	292 C3 106.3	0.000	N	45-29-06 108-58-18	N	233.1	50.78 -25.22	70.0	76.0	Short <sup>1</sup>
164107	JOLIET MT	BSFH APP C	292 C3 106.3	0.000		45-29-06 108-58-18		233.1	50.78 -25.22	70.0	76.0	Short <sup>1</sup>
NEW 162426	LOCKWOOD MT	BSFH APP C	294 A 106.7	0.000		45-45-48 108-27-20		320.8	0.48 -199.52	178.0	200.0	Short <sup>2</sup>
94495	LOCKWOOD MT	BSFH VAC C	294 A 106.7	0.000	N	45-49-09 108-24-51	N	23.8	7.19 -192.81	178.0	200.0	Short <sup>2</sup>
164108	LOCKWOOD MT	BSFH APP C	294 A 106.7	0.000		45-49-09 108-24-51		23.8	7.19 -192.81	178.0	200.0	Short <sup>2</sup>
NEW 162370	LOVELL WY	BSFH APP C	296 C 107.1	0.000		44-48-41 107-55-06		158.2	113.43 8.43	99.0	105.0	Close
94508	LOVELL WY	BSFH VAC C	296 C 107.1	0.000	N	44-36-23 108-23-30	N	177.9	128.29 23.29	99.0	105.0	Clear
164288	LOVELL WY	BSFH APP C	296 C 107.1	0.000		44-36-23 108-23-30		177.9	128.29 23.29	99.0	105.0	Clear

<sup>1</sup> The applicant was also the winning bidder for vacant channel 292C3 at Joliet, Montana (MMFM17C3). Pursuant to the FCC Public Notice dated December 1, 2004 the applicant is also filing a "one-step" upgrade application for construction permit on FCC Form 301 for a new FM station to operate on channel 290C1 at Joliet, Montana. Therefore, the instant Lockwood channel 294C1 application is being filed under the contingent application rule [Section 73.3517(e)] as grant of this application is contingent on the grant of the "one-step" upgrade application for construction permit for a new FM station to operate on channel 290C1 at Joliet, Montana.

<sup>2</sup> Existing allotment being upgraded by the instant application.

Figure 2



## PREDICTED FCC COVERAGE CONTOURS

PROPOSED FM OPERATION

LOCKWOOD, MONTANA

CH 294C1 100 KW 216 M

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

Figure 3

