

**NIER Survey
KJCG 88.3
The Moody Bible Institute
Missoula, Montana
BPED-19970716MA**

May 21,2010

Special operating condition number 3 of FM Construction Permit BPED-19970716MA, states:

The permittee/licensee shall, upon completion of construction and during the equipment test period, make proper radiofrequency electromagnetic (RF) field strength measurements throughout the transmitter site area to determine if there are any areas that exceed the FCC guidelines for human exposure to RF fields. If necessary, a fence must be erected at such distances and in such a manner as to prevent the exposure of humans to RF fields in excess of the FCC Guidelines (OET Bulletin No. 65, Edition 97-01, August 1997). The fence must be a type which will preclude casual or inadvertent access, and must include warning signs at appropriate intervals which describe the nature of the hazard. Any areas within the fence found to exceed the recommended guidelines must be clearly marked with appropriate visual warning signs.

On May 19, 2010, a survey was conducted to verify compliance with this special operating condition.

The survey was conducted utilizing a Narda SRM-3000, SN D-0016, with Narda Isotropic probe Model 2AX75M-3G, SN D-0014, with a frequency response of 75 MHz to 3 GHz. This meter is designed specifically for the purpose of verifying radio frequency radiation field strength for compliance with human exposure guidelines.

Description of the Site:

This communications site, locally know as "Dean Stone" is a remote mountain top site approximately 2 miles southeast of Missoula, Montana. The access road to the site has a locked gate excluding most public access. Located on the mountain top are FM broadcast stations KJCG(the construction permit of this report), KMZL, KBAZ, KZOQ, KVWE, KDTR, KKVU, KYJK, KBQQ, 4 FM translator or FM Booster stations, and Television Station KUFM-TV-D as well as cellular and PCS telephone, land mobile, wireless internet and wireless CATV users. There are no known RF sources on the site utilizing frequencies below 88 MHz.

Procedure:

The site was traversed with the SRM-3000 set to show the field strength of all RF emissions at the site. The unit was programmed to display the field strength as a percentage of the FCC OET Bulletin No. 65 Public/Uncontrolled guideline of $200 \mu\text{W}/\text{cm}^2$ for human exposure to non-ionizing radio frequency radiation. The meter was set to a 4 measurement average, taking a measurement approximately every 1.6 seconds. Measurements were taken at locations shown on the map at the end of this report and tabulated in Table 1.

As there are no known users at the site operating below 88 MHz, the measurement range for the Narda SRM-3000 was adjusted to all frequencies between 88 MHz and 1.9 GHz. The probe utilized has a frequency response of 75 MHz to 3 GHz so it was appropriate for the survey conducted.

To simulate a spatial average of measurements, a vertical sweep from approximately 0.3 meters above the ground to 2 meters above the ground was taken during a 4 measurement average for the meter. This reading was then saved in the SRM-3000's memory for later retrieval and the measurement location noted on a map of the site.

Results:

Table 1 shows a tabulation of the results of this survey. As can be seen, no location on this communications site was found to exceed the Public/Uncontrolled limit for human exposure to non-ionizing electromagnetic radio frequency radiation. The site was traversed north of the line shown on the map south of the Verizon tower and north of the Montana Communications Building and tower with no measurements exceeding 25% of the guideline for Public/Uncontrolled access.

Table 1.—NIER Survey Data

Point No.	Description	Value % Limit
1	W of KJCG tower	14.94
2	S of KJCG tower	11.30
3	E of KJCG tower	55.30
4	E edge of KJCG site	57.88
5	W of KDTR Generator	34.30
6	NE side of KDTR Building	40.47
7	W of Hickman Building	23.05
8	Access Road to KJCG site	29.09
9	Access Road to KJCG site	54.23
10	Access Road to KJCG site	35.63
11	Junction of KJCG road, main road	22.71
12	Junction of KBQQ access road, main road	36.87
13	Junction of KZOQ access road, main road	39.57
14	Junction of KBAZ access road, main road	60.02
15	West of KBAZ tower	32.23
16	South of KBAZ Building	42.39
17	East edge of KBAZ Site	35.44
18	North of KBAZ Ice Bridge	75.76
19	West of KQOZ Guy Anchor	48.33
20	West of Verizon Building	38.50
21	West of KZOQ Tower	25.97
22	On Main Road near KBAZ Road	55.64
23	On Main Road North of KBAZ Tower	40.78
24	On Main Road South of Satellite Dishes	76.27
25	On Main Road near KMZL Building	64.40
26	NE of KMZL Antenna Pole	57.22
27	East End of Montana Comm. Site Parking Lot	25.83
28	North Edge of Montana Comm. Parking Lot	52.75
29	North of TV camera	47.32
30	NW of Montana Comm. Tower	53.55
31	West of Propane Tanks	94.35

Conclusions:

The addition of the KJCG signal does not increase the level of non-ionizing electromagnetic radio frequency radiation to levels exceeding the FCC guideline for Public/Uncontrolled access. The site appears to fully comply with FCC guidelines set forth in OET Bulletin No. 65.

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