

Radio Frequency Field Strength Measurements

KGFJ CH-201 88.1 MHz

BELT, MT

Prepared by:
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June 17, 2014

This report is the result of an RF field strength survey taken at the transmitter site of KGFJ Belt, MT. This report is being submitted to comply with part 4 of the "Special operating conditions or restrictions" of the license, license file number: BPED-20110620ADW, which requires RF field strength measurements to ensure compliance with FCC guidelines (OET Bulletin No. 65, Edition 97-01, August 1997).

KGFJ is a class C2 station operating on channel 201 (88.1 MHz) with an ERP of .73kW. The antenna consists of a 4 bay, circularly polarized array with a center of radiation at 20 meters, and is non-directional. The transmitter site is located on Tiger Butte, near Belt, MT. One other full power FM station operates from the same tower, and was in operation at the time of this survey. It is KIKF operating on 104.9 MHz.

Equipment used for the survey consisted of the following:

Narda model NBM-520A RF field strength meter.

Narda model EA-5091 "E field" probe.

The meter was set to read and store instantaneous peak values using the FCC standard for "uncontrolled environments".

The survey was conducted along 8 radials beginning from the base of the tower and extending out approximately 100 meters, or to the limit that terrain would allow. The probe of the field strength meter was held upward approximately 7-8 feet off the ground and swept horizontally while walking the radials.

Radial	Peak Value
0 deg.	47% of uncontrolled environment
45 deg.	39% of uncontrolled environment
90 deg.	43% of uncontrolled environment
135 deg.	43% of uncontrolled environment
180 deg.	34% of uncontrolled environment
225 deg.	31% of uncontrolled environment
270 deg.	40% of uncontrolled environment
315 deg.	25% of uncontrolled environment

The variations in level along the 8 radials are primarily due to shielding effects of the tower the antenna is mounted on. Terrain is relatively flat along all 8 of the radials. The antenna is leg mounted on the North leg of the tower.

In summary, the field strength measurements around the tower of the KGFJ transmitter indicate that the highest field strength readings of 47% of maximum for an uncontrolled environment are within the 200 $\mu\text{W}/\text{cm}^2$ uncontrolled (public) exposure limit.

I hereby certify that I have been a broadcast technician for over 8 years. I have been involved in or supervised the construction of 12 full power FM stations, and numerous FM translator stations. I presently hold the title of Senior Field Technician for CSN International and Calvary Chapel of Twin Falls, Inc.

I further certify that the preceding is true and correct to the best of my knowledge and ability.

Respectfully,

A handwritten signature in black ink, appearing to read 'Dustin Pamplona', with a long horizontal flourish extending to the right.

Dustin Pamplona
Sr. Field Technician
Calvary Chapel of Twin Falls, Inc.