

RADIO FREQUENCY FIELD MEASUREMENTS FOR:

KAWS 89.1 MHz

MARSING, ID

Prepared by:
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Dir. of Eng.
Calvary Chapel of Twin Falls
Feb. 18, 2009

This report is the results of an RF field intensity survey taken at the transmitter site of KAWS, Marsing ID. The report is being submitted to comply with part 3 of the "special operating conditions or restrictions" of the construction permit, file number: BMPED-20070328AFA, which requires RF field measurements to insure compliance with FCC guidelines (OET Bulletin No. 65, edition 97-01, August 1997).

This is the second survey taken as a result of changing the manufacturer and model number of the antenna used at the site. The original antenna was a PSIFLV-4A. This antenna was destroyed by an ice fall during the winter of 2007-2008. The antenna was replaced with a Telewave ANT-90D, 4 bay array. Both antennas are 4 bay, vertical polarized, non-directional arrays.

KAWS is a C1 station operating on channel 206 with an ERP of 8.75 KW. The antenna is a 4 bay, vertically polarized array with a center of radiation at 12 meters, and is omnidirectional. The transmitter site is located on War Eagle Mountain, near Silver City, ID. Two other full power FM stations operate approximately 200 meters to the west and were in operation at the time of this survey. They are KARJ and KGCL.

Equipment used for the survey consisted of the following:

Narda model 8718B RF field strength meter, SN# 1702 last calibrated 02-13-09

Narda model 8760D E field probe, SN# 07008 last calibrated on 02-13-09

Calibration certificates are included with this report. 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 the terrain would allow. The probe was oriented to the vertical field of the antenna and held upward approximately 7-8 feet off the ground and swept horizontally walking the radials. Results are listed below.

Radial	Peak Value
0 deg.	25.81% of uncontrolled environment
45 deg.	19.06% of uncontrolled environment
90 deg.	17.23% of uncontrolled environment
135 deg.	16.04% of uncontrolled environment
180 deg.	13.44% of uncontrolled environment
225 deg.	16.72% of uncontrolled environment
270 deg.	19.21% of uncontrolled environment
315 deg.	29.36% of uncontrolled environment

The variations in level along the 8 radials is primarily due to terrain. The tower sits approximately 15 feet below the crest of the mountain which is to the northwest. Terrain to the east and south rapidly drops off a short distance from the tower.

In summary, the field strength measurements around the tower of the KAWS transmitter indicate that the highest field strength reading of 29.36 % of maximum for an uncontrolled environment are within the 200 uW/cm² uncontrolled (public) exposure limit. As a precaution two yellow "RF caution signs" have been posted at the site. One on the building facing the access road and one on the tower. In addition access to the climbing ladder is restricted with a locked barrier.

I hereby certify that I have been a broadcast technician for over 35 years. I hold an FCC General Class radio-telephone license. I have been involved and supervised the construction of 11 full power FM stations, 2 full power TV stations, 4 low power TV stations and numerous FM translators. I presently hold the title of director of engineering for CSN International and Calvary Chapel of Twin Falls and am responsible for the technical operations of 28 full power FM stations, over 400 FM translator stations, 4 low power TV stations and a satellite uplink facility.

I further certify that the above report is true and correct to the best of my ability.

Respectfully,

Kelly Carlson
Director of Engineering
CSN International & Calvary Chapel of Twin Falls



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Certificate of Conformance

The following instrument was inspected and found to be fully operational and passed all functional tests as required and/or specified by the manufacturer's inspection/test procedure or by an equivalent Advanced Test Equipment Corp. approved test procedure.

Manufacturer: NARDA

Model: 8760D

Serial number: 07008

Issued by:

Date:

2/13/2009

QF40/051107





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Manufacturer: NARDA

Model: 8718B

Serial number: 1702

Issued by: _____

Date: 2/13/2009

QF40-051107





Certificate of Calibration

L-3 Communications, Narda Microwave-East, hereby certifies that the referenced instrument has been calibrated by qualified personnel to Narda's approved test procedures.

Furthermore, the instrument meets, or exceeds, all published specifications and the calibration has been performed with test instrumentation that, where applicable, is traceable to the National Institute of Standards and Technology.

Narda's calibration measurements are traceable to the National Institute of Standards and Technology to the extent allowed by the bureau's calibration facilities.

Customer: ADVANCED TEST EQUIPMENT CO Certificate #: 87378 3
SAN DIEGO, CA 92191

Model #: 8760D

Serial #: 07008

Description: PROBE

PO #: 4311

Date Calibrated: 06/16/2008

R.O. #: 87378

Vince Donovan
Vince Donovan
Manufacturing

BY NARDA MICROWAVE
DATE *6/28* BY *HP*

Ken Peck
Ken Peck
Quality Assurance