

Environmental Statement

The site, Krell Hill, is located on an unpaved private access road 7.9 km southeast of Spokane, WA. Unauthorized access is prevented by a locked gate 1.1 km from the site. The transmitter will be located in a locked building. The tower and transmitter building are within an enclosed, secured fenced area, with no access available to the general public. At its closest point, the chain link fence is 3.1 m (10 ft) from the tower base. Signs advising possible radiation hazard are posted within and about the 6ft. chain link fenced area. Access to the fenced area and to the transmitter building is available only to authorized technical and maintenance personnel. There is only one significant rise in terrain of 23 meters located 534 meters to the NNW, which is unpopulated.

Attached is the most recent RFR Analysis performed for KSPS-TV which states that ***“the highest percentage of general population (uncontrolled) RFR level was below 9%. No RFR levels exceeded the maximum permissible exposure limit (MPE) for uncontrolled or controlled access.”***

Calculations performed as outlined in OST Bulletin No. 65 indicate that the proposed DT translator, using a relative field factor (F) from the manufacturer's data of .45, show that the proposed DT translator will only add an additional 0.25% of general population (uncontrolled) ANSI allowable limit. Therefore, construction of the proposed KWSU-DTV translator will not result in RF exposure to the general public which would exceed the Commission's standards.

Agreements are in effect with all users of this site which specify that operations will cease, power will be reduced to a required level, or maintenance time will be limited if it is necessary for repairs or maintenance to be performed on the tower structure or if workers are required to be in proximity to areas of high RF exposure for extended periods of time. All users at the site have agreed to take necessary steps to protect workers from excessive RF radiation exposure.

Washington State University has published guidelines for all sites, which includes procedures that protect employees from high levels of radiation. All employees required to work in hazardous conditions are thoroughly trained in RF hazard prevention.

2006 Krell Ridge Spokane RFR Analysis

KSPS TV DT

By Audiocom Electronics Inc.

Introduction

Audiocom Electronics Inc., was contracted to conduct a rigorous Radio Frequency Radiation (RFR) analysis at the KSPS TV DT transmitter site atop Krell Ridge southeast of Spokane Washington on July 27th 2006.

The findings and conclusions of this analysis are a matter of record and are reported as documented in the pages that follow.

Credentials & Qualifications

This study and measurements were performed by myself, Gary Baker- President-Audiocom Electronics, Inc. This study has been compiled to the best of my knowledge and measurements made with “state of the art” scientific test equipment.

I am qualified to complete the work and report of findings contained within this study.

I graduated from Washington State University with a Bachelors Degree in 1969. I have worked in the Broadcast Engineering field for over 40 years working for AM, FM and Television Stations. I worked as Director of Engineering for KSPS-TV(full power PBS) in Spokane and have performed Consulting work for the last 14 years in the same field. I am a member in good standing with the Society Of Broadcast Engineers, Inc.

Study Completed: July 27, 2006

By:



Gary Baker, Consultant

Test Equipment Used

A Narda Model SRM3000 Electromagnetic Radiation Survey Meter (S/N H0006) with a Narda Model BN3501/01 Isotropic Shaped Electric Field (S/N G-0141) was used to make measurements proportional **to CFR 47 paragraph 1.1310 Radiofrequency Radiation Exposure limits, Occupational/Controlled Environments for maximum permissible exposure (MPE)** in the spectrum range of 88 mhz to 626 mhz with an accurate and repeatable response based on the attached Narda Calibration Certificate.

A Narda Model BN3551/01 H-Shaped Field Probe (S/N B-0059) is used to make measurements in the spectrum range of 54 mhz to 88mhz and an H-Field response based the attached Narda Calibration Certificate.

Each recorded measurement made with this probe is comprised of three actual measurements, one in each of the three planes-X, Y, Z. The SRM3000 then compiled these three measurements to formulate a single isotropic recorded measurement for each location.

The Narda Model SRM3000 Electromagnetic Radiation Survey Meter allows for accurate and repeatable measurements. The SRM3000 is unique to the industry by making and recording measurements for each transmitter and providing the percentage of energy contributed by each to the overall radio frequency exposure level. This feature is of particular interest when a site is measured to be “out of compliance”. The individual transmitter display and level measurements immediately reflects the “offending transmitter”. This allows for individual and specific transmitter power reduction and/or antenna modifications as deemed necessary to bring the site into compliance without impacting the entire site user community.

Measurement Procedures

Measurement procedures outlined in OET Bulletin 65, Edition 97-01, **“Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields”, ANSI/IEEE Std**

C95.3-1991, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields—RF and Microwave and NCRP Report No 119, “A practical Guide to the Determination of Human Exposure to Radiofrequency Fields” where used for the measurements taken at The KSPS site. Spatially averaged measurements were not made or necessary at points since no RFR measurement taken at any time came close to the OET 65 limits. Measurements to determine exposure compliance were made at least 7.8 inches from any object based on ANSI C95.3 guidelines. This recommendation is to assure the measurements are not tainted by re-radiation from metallic objects.

The survey began as a “sweep” of the mountaintop and surrounding broadcast facilities focusing on areas, accessible to the general public, occupational areas (see map on next page). This procedure was used to determine the highest percentages of radiofrequency (RF) energy. The map is a reference to show the highest percentages of general population (uncontrolled) RFR.

Stations listed below referenced in this study were located using a data search within a 20-kilometer radius from the KSPS TV transmit antenna coordinates listed with the Federal Communications Commission (FCC). Stations not discovered in the search would be referenced in a “spectrum analysis” measurement showing as “others” or unidentified signal sources.

If RFR percentages exceeded uncontrolled limits, an attempt to determine specific culprit signals would have been completed which was not necessary in this study as uncontrolled RFR levels were not exceeded.

Measurement Data

The following is a compilation of the measurements. The measurement number is related to the noted measurement locations on the maps. If spatial averaging was used, the associated column will reflect three sets of measurements with a (xxx) after the measurement indicating the averaged value for that particular measurement location. The MPE (maximum permissible exposure) is presented by two different levels. The MPE for “uncontrolled/public” is the level the general public may be exposed to that

will NOT harm the individual based on OET65 guidelines.

The KSPS access areas for workers including your tower access and roof does not exceed the “Controlled / occupational” radiation level. The “[adjusted]” values reflect what the %MPE would be if the transmitter(s) that were not at full power were operating at full licensed operating power.

Data Conclusion & Recommendations

Measurement Number	% of MPE (Spatial Ave),[adjusted] Uncontrolled/Public Access	% of MPE(Spatial Ave),[adjusted] Controlled/Occupational Access
1		7.02
2		7.04
3		7.07
4		7.09
5		7.17
6		7.18
7		7.18
8		7.18
9		7.33
10		7.34
11		7.34
12		7.34
13		7.35
14		7.37
15		6.66
16		6.78
17		6.82
18		7.28
19		6.55
20		7.00
21		7.22
22		5.92
23		6.20
24		6.25
25		7.07
26		8.07
27		8.68
28		8.99

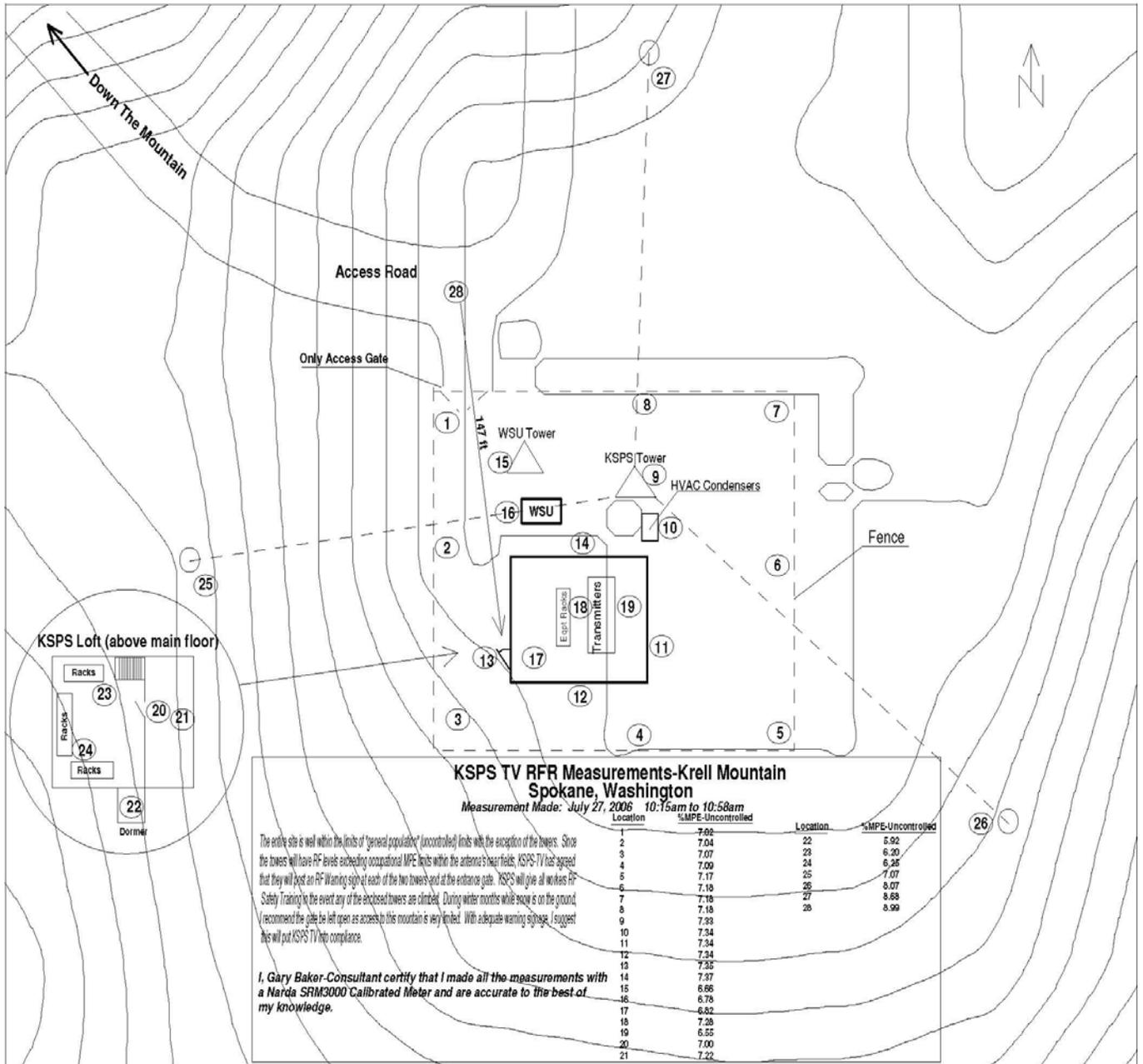
Data gathered in this survey shows the KSPS transmitter site and surroundings to meet the criteria for general population / uncontrolled environment.

The highest percentage of general population (uncontrolled) RFR level was below 9%. No RFR levels exceeded the maximum permissible exposure limit (MPE) for uncontrolled or controlled access. It should be noted this study did not include analyzing tower structures. The areas analyzed were from ground level to a general height of 6 feet. Therefore any worker climbing a tower for service work should shut off all energized transmitting devices and carry an alerting device at all times in the event MPE levels are exceeded.

Access gates to towers should carry RF warning signage to warn workers of RF exposure. The last section of this report has two articles that may assist in determining suitable methods for sign placement.

Anyone working in or around a transmitter site should directly supervised at all times by personnel trained in RF safety.

Any time RF changes are made at a transmitter site, an RFR exposure study should be conducted as a matter of good workmanship and protection of the public and workers.



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Calibration Certificate

Narda Safety Test Solutions hereby certifies that the referenced equipment has been calibrated by qualified personnel to Narda's approved procedures. The calibration was carried out within a certified quality management system conforming to DIN EN ISO 9001:2000.

The metrological confirmation system for test equipment complies with ISO 10012-1.

Object	Selective Radiation Meter Basic Unit 100 kHz to 3 GHz
Type	SRM-3000, BN 3001/01
Serial Number	H-0006
Manufacturer	Narda Safety Test Solutions
Customer	
Date of Calibration	23-Mar-2006
Result of Calibration	Measurement results within specifications
Confirmation interval recommended	24 months
Ambient conditions	23 °C ± 3 °C (20 ... 60)% rel. humidity
Calibration procedure	3000-8701-00A

Pfullingen, 26-Apr-2006


 Person in charge
 P. Geyer


 Quality management representative
 W. Kumbier



Certified by DQS against
 DIN EN ISO 9001:2000
 (Reg.-No. 099379)

This certificate may only be published in full, unless permission for the publication of an approved extract has been obtained in writing from the Managing Director.