

Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields

**Multi-Station Transmitter Site
Stukel Mountain
Klamath Falls, Oregon**

**Report of Measurements & Conclusions
April 11, 2014**

This report details radio frequency radiation (RFR) measurements made on April 11th, 2014, at a multi-user transmitter site on Stukel Mountain, near Klamath Falls, Oregon. The measurements detailed herein were made by James Boyd of Boyd Broadcast Technical Services following the completion of construction of KHIC, Keno, Oregon, pursuant to special operating condition 4 specified in the KHIC Construction Permit (BNPH-20120518ADG).

The measurement equipment used consists of a Narda Microwave model 8718B RFR meter (SN: 7127) with a model A8722D E-Field probe (SN: 09014). The E-Field probe is broadband with a frequency coverage of 300 kHz to 50 GHz. The instrument set was calibrated in August of 2013.

The A8722D probe used is a “shaped” probe, meaning that the response to radiofrequency fields follows the 1997 FCC Limits for Maximum Permissible Exposure (MPE) for Occupational/Controlled Exposure, resulting in a display on the 8718B meter of percentage of MPE. Because of the frequencies in use at this site, the MPE for General Population/Uncontrolled Exposure limit is one-fifth or 20% of the Occupational/Controlled Exposure limit. Readings in areas where access is available to the General Population (Uncontrolled), were multiplied by a factor of 5. The FCC Limits for Maximum Permissible Exposure curve is shown on page eight. A picture of the test equipment used is shown on page nine.

Measurement techniques used are consistent with generally accepted practices. Steps and procedures used in making these measurements are similar to those printed in Section 3 of OET Bulletin 65, Edition 97-01, August 1997, published by the FCC Office of Engineering and Technology.

KHIC is located on one tower of a complex consisting of two towers and two transmitter buildings. Four other FM broadcast stations as well as two television transmission facilities and two television translators share these two towers and buildings. This complex is surrounded by a fence and two locking vehicle gates and is only accessible by authorized workers. Appropriate warning signs are posted on the fence and gates.

Several other towers and buildings are located nearby but outside of the fenced complex. These facilities house several FM broadcast and television broadcast stations as well as FM translators, television translators and numerous land mobile communications facilities.

The entire communications and broadcast site is in a rural area. It is rugged and hard to access on the west side of the site. Roads on the south, east and north sides of the site can allow uncontrolled access. There are several locked gates located at the bottom of the mountain limiting uncontrolled access.

At the time of the measurements, it is believed that all stations were operating with licensed facilities and power levels.

The data collected conclusively shows RFR levels in areas accessible to the general public are below FCC limits for General Public/Uncontrolled MPE. Workers in the buildings at the site are safe at full power levels. Tower work, of course, requires shut down of the facilities.

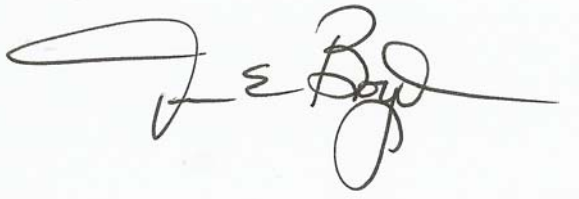
No areas outside of the fenced complex exceed General Population/Uncontrolled MPE levels. The highest level recorded was 87.1% of the General Population/Uncontrolled MPE level.

No areas inside the complex (inside the fenced area) or inside the transmitter buildings exceed Occupational/Controlled MPE levels. The highest level recorded was 89.8% of the Occupational/Controlled MPE level.

A written policy exists for reducing power or for complete facility shut down when workers may be exposed to RFR levels exceeding Occupational/Controlled MPE limits. Contact information is available to all tenants at the site.

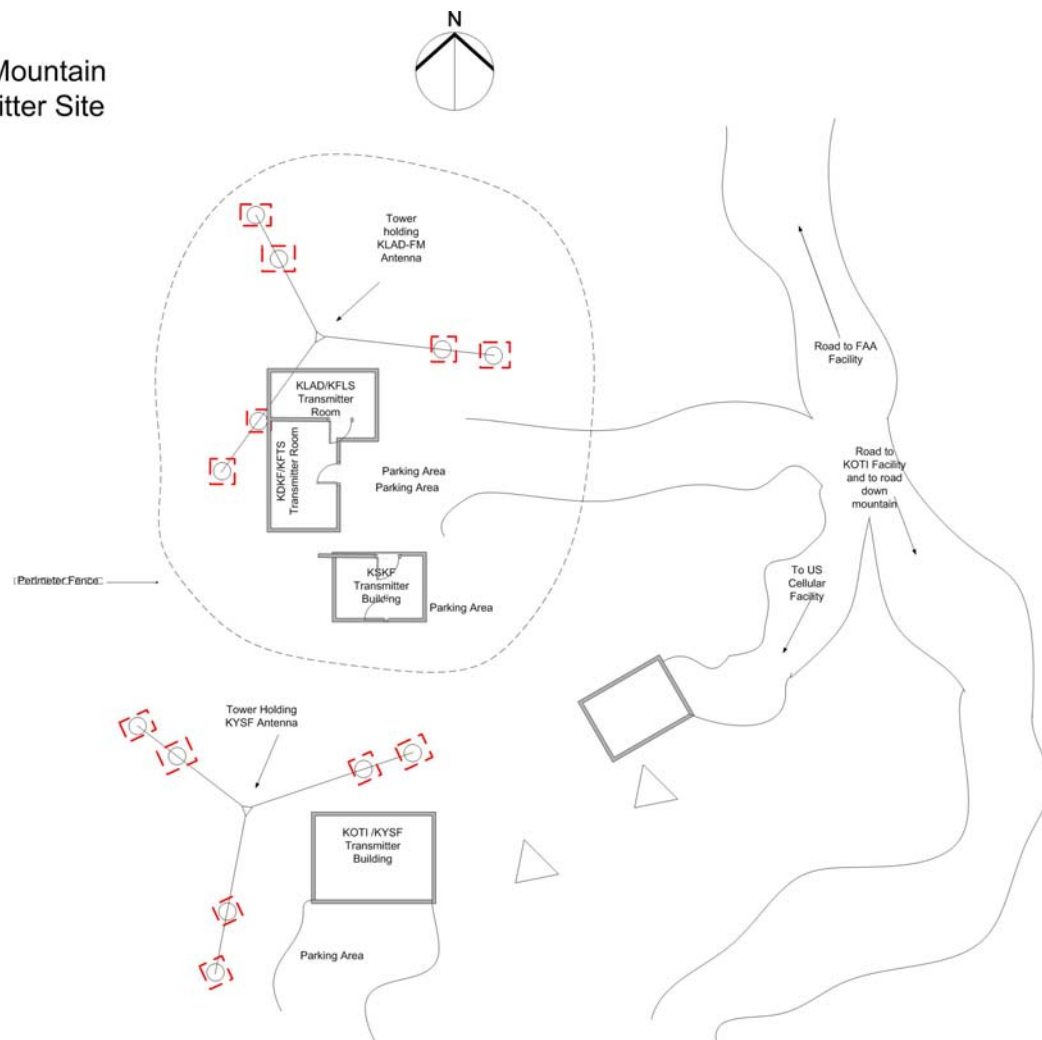
A drawing of the site is shown on page three. A topographical map showing the location of the transmitter site is on page four. Pictures of the transmitter site are shown on pages five, six and seven.

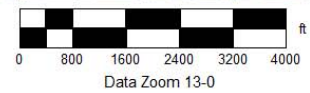
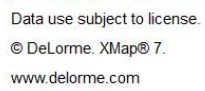
All measurements were made by the undersigned who is an experienced radio broadcast technician and has experience making these measurements. The technical qualifications of the undersigned are a matter of record with the Federal Communications Commission.

A handwritten signature in black ink, appearing to read 'J E Boyd', with a long horizontal line extending to the right.

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Stukel Mountain Transmitter Site







Access road and gate and fence surrounding site



View of fence around tower bases



Parking area

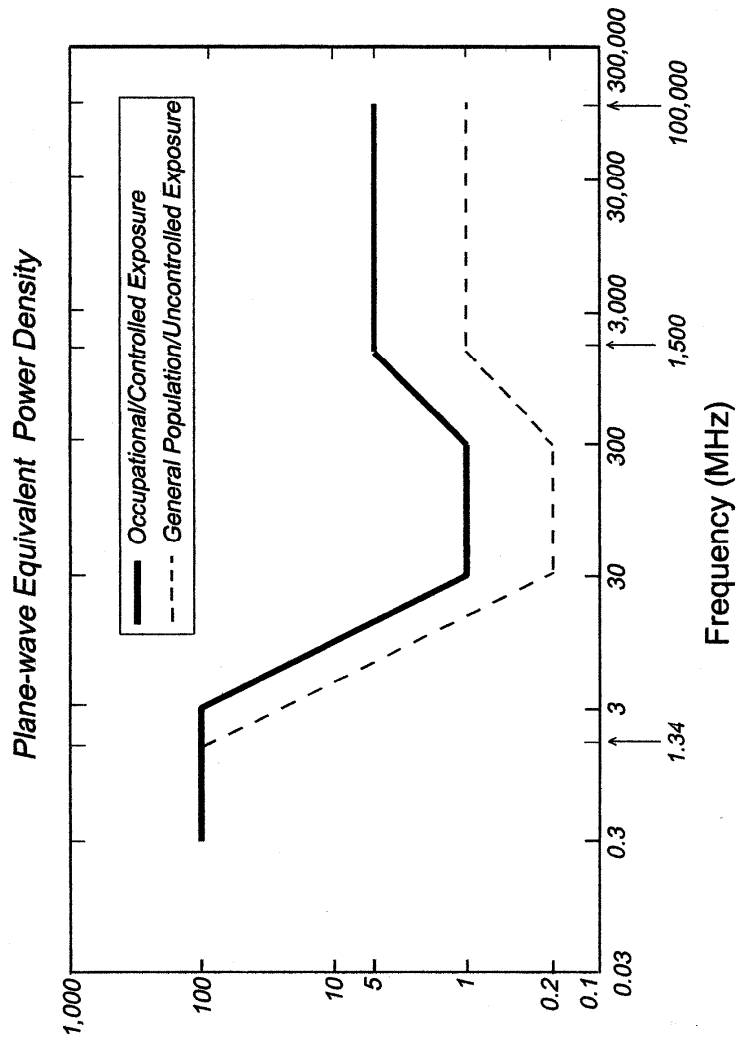


KHIC Transmitter Building



Picture of towers

Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)





Narda Test Equipment