

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

KPPC, KLLP and KPKY

**Howard Mountain Shared Transmitter Site
Pocatello, Idaho**

**Report of Measurements & Conclusions
June 19, 2007**

This report details radio frequency radiation (RFR) measurements made on June 19th, 2007, at the Howard Mountain common transmitter site for KPPC, KLLP and KPKY. The site is located approximately 5.5 km west of Pocatello, Idaho. A number of land-mobile, radio and television translator facilities are located near the transmitter site.

These measurements were made following the construction of KPPC. KPPC will operate with an effective radiated power of 12 kW (horizontal and vertical polarizations), KPKY operates with 100 kW ERP and KLLP operates with 7 kW ERP. All three stations are combined with a Dielectric combiner into a Dielectric DCRM-8B85, 8 bay, 0.85-wave spaced antenna, mounted on a 45 meter guyed tower with the center of radiation 37 meters above ground level. The total radiated ERP is 119 kW.

The measurement equipment used consists of a Narda Microwave model 8718B RFR meter (SN: 7127) with a model A8722D E-Field probe (SN: 09014). This E-Field probe is broadband with frequency coverage of 300 kHz to 50 GHz. The instrument set was calibrated in July of 2006.

The A8722D probe used is a “shaped” probe, meaning that the response to radio frequency 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.

All areas at the site, except for the interior of the transmitter building are considered to be accessible by the General Population.

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.

Conclusions of this study are as follows:

- **Radio frequency radiation levels surrounding the northeast guy anchor and the guy wires attached to this anchor exceed the General Population/Uncontrolled MPE levels. After construction of a fence around this area, RFR dropped to 84% of the General Population/Uncontrolled MPE level.**
- **No areas in the transmitter building have radio frequency radiation levels exceeding the Occupational/Controlled or the General Population/Uncontrolled MPE.**
- **Areas on the tower structure have radio frequency radiation levels which exceed the Occupational/Controlled MPE. Access to the tower is restricted by the tower owner. The applicant (KPPC) will cooperate with other users of the site to reduce power of the facility, or discontinue operation, as necessary, to limit human exposure to levels less than specified by the Federal Communication Commission should anyone be required to climb the tower for maintenance or inspection.**

A complete listing of the measurement data collected is shown on page 3 of this report. A drawing of the site is on page 4. Pictures of the site and the antenna are shown on pages 5, 6 and 7. A topographical map showing the location of the transmitter site is on page 9. The FCC Limits for Maximum Permissible Exposure curve is shown on page 10. A picture of the test equipment used is shown on page 11.

After these measurements were made, a fence was constructed around the northeast guy anchor. The fence was built in such a way that no area around the guy anchor where radio frequency radiation exceeds General Population/Uncontrolled MPE levels could be accessed by the general public. Therefore no area around the tower site exceeds 84% of General Population/Uncontrolled MPE level. A picture of the fence is printed on page 8.

All measurements were made by me. I am an experienced radio broadcast engineer. I have experience making these measurements. My technical qualifications are a matter of record with the Federal Communications Commission.

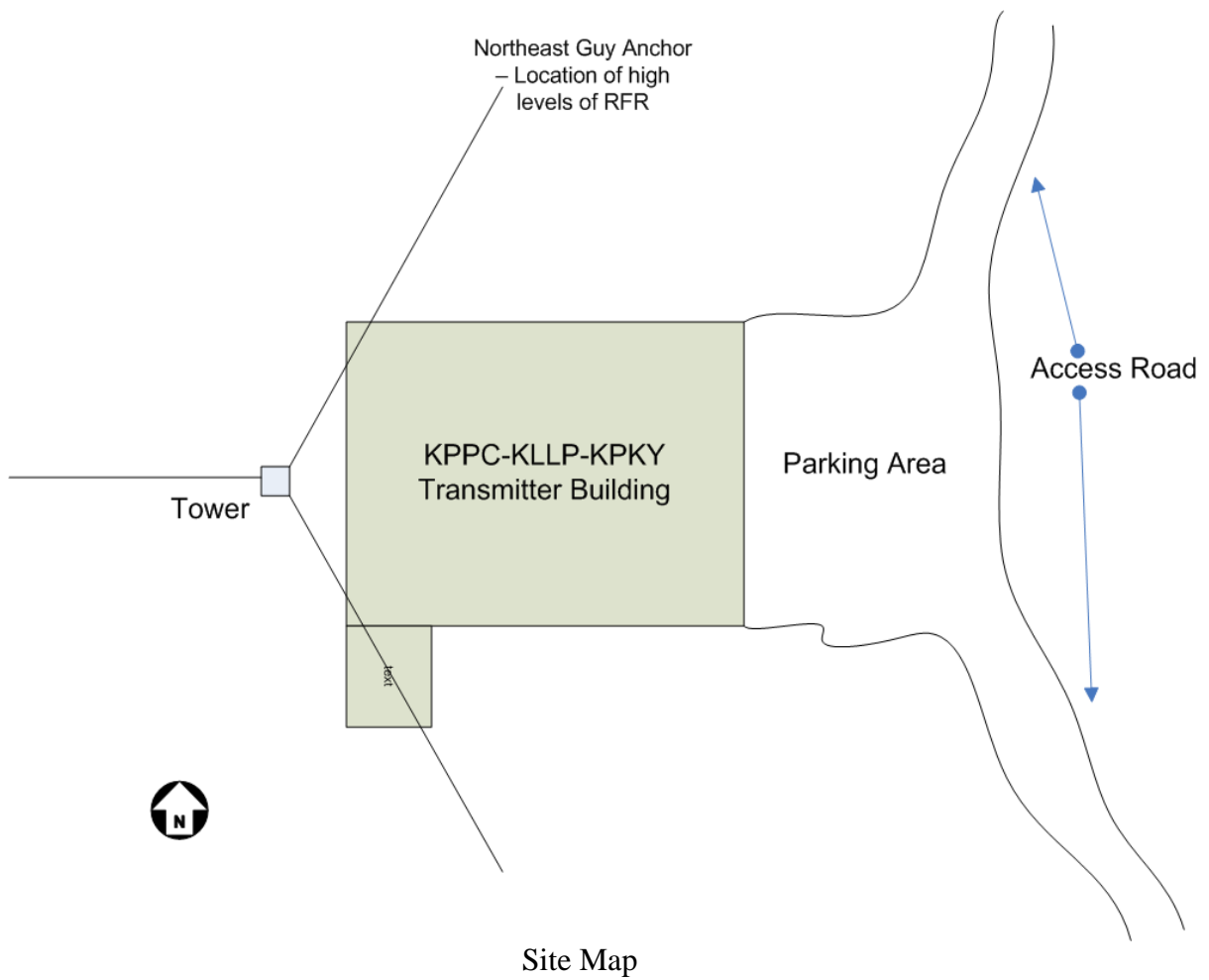
A handwritten signature in black ink, appearing to read "J E Boyd", with a long horizontal line extending to the right.

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Measurement Data

(Highest level recorded as a percentage of General Population/Uncontrolled MPE)

Interior of transmitter building	8.5%
Parking area in front of transmitter building	71.5%
Areas on south and west sides of transmitter building	84%
Northeast guy anchor (without fencing)	139%
Northeast guy anchor fence perimeter	84%





Building and parking area



Northeast guy anchor can be seen at right center just to right of propane tank



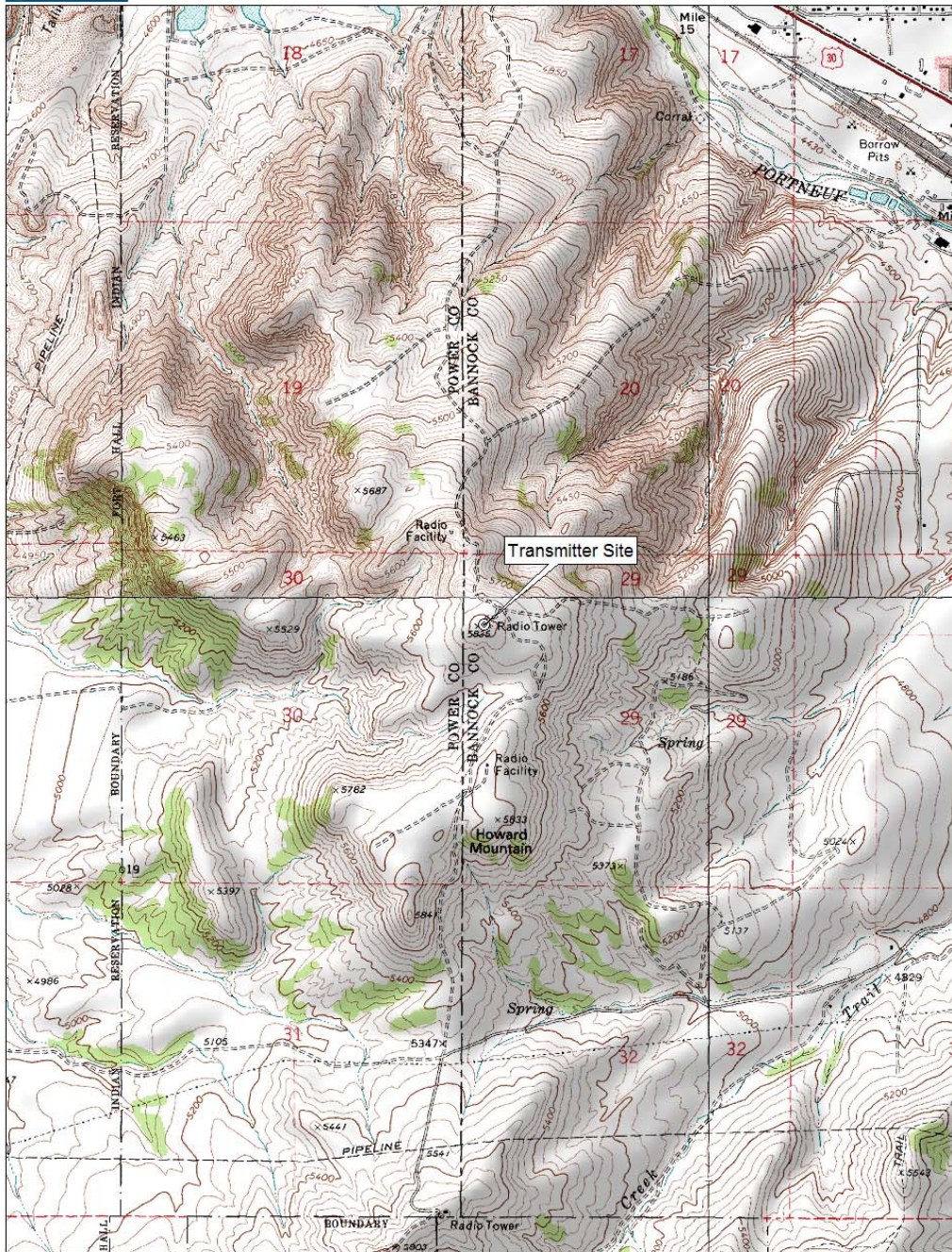
Dielectric Antenna



Transmitter Building Interior



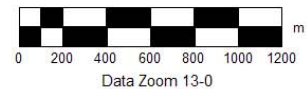
Northeast Guy Anchor After Construction of Fence



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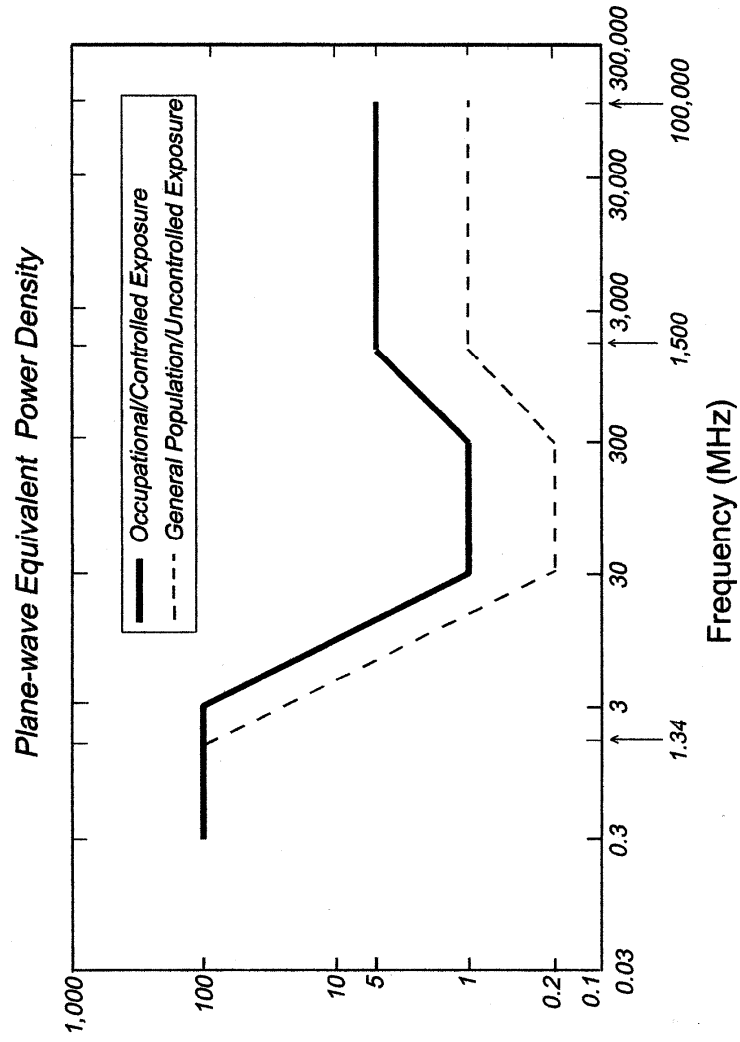
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Data Zoom 13-0

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





Narda Test Equipment