

# WOVM Appleton, WI

## RF Field Strength Measurements

### Introduction

Construction and testing of the WOVM facility was completed on January 24<sup>th</sup>, 2014. I, Andrew Disterhaft, Consulting Engineer for the WOVM facility build-out, energized the transmitter and antenna system to full permitted power and measured the site for RFR compliance with OET-65 using a Narda Model 8616 Electromagnetic Radiation Monitor with a Narda Model 8682 Isotropic Probe.

### Description of the Site and Measurements Taken

WOVM is located in an open field on a self-supporting tower. This site is home to other paging and two-way radio services. WOVM is the only broadcast station at this location. WOVM's antenna, a Shively 6014-2/2-DA panel antenna is mounted at 52 meters above ground, and operates with 42 kW ERP, as specified in the WOVM construction permit.

Considering the directional nature of the signal, I divided the site into a polar grid. On each of eight radials, readings were taken from the base of the tower out to 200 feet from the base at 20 foot intervals. With the WOVM transmitter not energized, the highest reading found at any location was no more than 20% of the maximum general population/uncontrolled exposure limit, or 0.04 mW/cm<sup>2</sup>. With the WOVM transmitter energized, the highest reading found at any location was approximately 50% of the maximum general population/uncontrolled exposure limit, or 0.11 mW/cm<sup>2</sup>. Since no location at this site exceeded 100% or 0.2 mW/cm<sup>2</sup>, the facility is fully compliant with the uncontrolled and controlled access provisions of OET-65.

Signs have been posted at the site warning of the presence of RFR and its potential dangers.

### Summary

The highest reading found after completion of the measurements described above was 0.11 mW/cm<sup>2</sup>. This value is less than the 0.2 mW/cm<sup>2</sup> permitted for uncontrolled (public) exposure and 1.0 mW/cm<sup>2</sup> permitted for controlled (worker) exposure.

### Conclusion

There are no areas that exceed either uncontrolled or controlled exposure limits. Signs have been posted at the site warning of the presence of RFR. Therefore, this site complies with OET-65.

Submitted this 26<sup>th</sup> day of January, 2014,

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

Andrew J. Disterhaft