

Exhibit 10

Attachment VIII

Radiofrequency Electromagnetic Field Strength Measurements

APPLICATION FOR STATION LICENSE

Supporting FCC Construction Permit BPH-20171017AAH

KOSI(FM) Denver, Colorado (Facility ID 67844)

Maximum Permissible Exposure (MPE) Survey for KOSI-FM (101.1 MHz) on Mt. Morrison, CO



April 16, 2018

For Bonneville International Corporation

55 North 300 West, 2nd Floor

Salt Lake City, UT 84101

FCC Facility ID 67844, File #BPH-20171017AAH



Jay M. Jacobsmeyer, P.E.

7222 Commerce Center Drive, Suite 180

Colorado Springs, CO 80919

(303) 759-5111

jacobsmeyer@pericle.com

Maximum Permissible Exposure (MPE) Survey For KOSI-FM (101.1 MHz) on Mt. Morrison, CO

1.0 Executive Summary

This report documents a Maximum Permissible Exposure (MPE) survey to satisfy Special Operating Conditions or Restriction #10 of FCC Construction Permit #BPH-20171017AAH:

“The permittee/licensee shall, upon completion of construction and during the equipment test period, make proper radiofrequency electromagnetic (RF) field strength measurements throughout the transmitter site area, including inside and on the roof of all nearby buildings, to determine if there are any areas that exceed the FCC guidelines for human exposure to RF fields. Any areas, including inside or on the roof of a building, found to exceed the recommended guidelines must be clearly marked with appropriate visual warning signs which describe the nature of the hazard. Furthermore, access to these areas must be restricted to prevent the exposure of humans to RF fields in excess of the FCC Guidelines (OET Bulletin No. 65, Edition 97-01, August 1997). If necessary, a fence must be erected at such distances and in such a manner as to prevent the exposure of humans to RF fields in excess of the FCC Guidelines. The fence must be a type which will preclude casual or inadvertent access, and must include warning signs at appropriate intervals which describe the nature of the hazard. Any areas within the fence found to exceed the recommended guidelines must also be clearly marked with appropriate visual warning signs.”

The applicant has constructed a transmitter facility on Mt. Morrison in Jefferson County, Colorado at 39° 40' 24.40" N 105° 13' 2.50" W (NAD 27). The antenna is a directional master FM antenna shared with two other full power FM stations.

An MPE survey was conducted on March 21, 2018 using a broadband exposure meter and following methods recommended in OET-65 and ANSI C95.3-2010. At the time of this survey, two other stations were operating from the master FM antenna, both at full licensed power: 100.3 MHz and 105.1 MHz (TPO verified on site). Measurements were collected at ground level, on the roof of the transmitter building and inside the transmitter building. All measurements at ground level outside the perimeter fence were below the FCC public exposure limit. The highest reading was recorded at ground level inside the fence and roughly 100' north of the tower at 51% of occupational, which is above the FCC public exposure limit but below the occupational limit. Personnel who do not automatically fall into the occupational exposure category are not allowed to work in this area unless escorted. The entire facility, including transmitter building, ice bridge and tower, is enclosed by an 8' high chain link fence topped with three strands of barbed wire. The entire perimeter of the fence was inspected during the MPE survey and the fence integrity is intact. The sole vehicle gate is locked at all times when personnel are not working on the site. The facility is located on private land, is remote from populated areas and is accessible by a road owned by the site owner. The lower gate on Grapevine Road located 2.2 miles west of the site prevents unauthorized vehicle traffic.

We can therefore conclude that the facility complies with FCC rule parts 1.1307-1.1310 governing human exposure to radio frequency energy.

2.0 Measurement Approach and Results

Spatial average power density measurements were collected at over 50 locations in the vicinity of the transmit antenna, ERI Model 1182-6CP-DA-SP. This antenna is a 6-bay panel antenna with two antenna elements per bay, oriented toward 70 degrees true with a cardioid azimuth pattern. Vertical distance between radiating elements is short spaced (less than one wavelength) to achieve an array pattern with greatly reduced downward radiation. See Figure 1.



Figure 1 - ERI Master FM Antenna (facing southwest)

The KOSI 101.1-FM transmitter was verified to be operating at 10 kW during the survey which corresponds to 100% transmitter power output and an ERP of 100 kW (directional). The other

two stations sharing the antenna, 100.3 & 105.1, were also verified to be operating at full power.

The MPE survey was accomplished on March 21, 2018 by Jay Jacobsmeyer (*Pericle*) with assistance from Mike McGinley (*Pericle*) and with Bonneville chief engineer Brad Hart present. Measurements were conducted in accordance with the guidelines published in ANSI C95.3-2002 [3] and FCC Bulletin OET-65 [2]. The survey was accomplished with the test equipment listed in Table 1.

Table 1 - Test Equipment Used in Survey		
Instrument	Serial Number	Cal. Due (2 yr.)
Wandel & Goltermann (W&G) EMR-300	B-0053	February 24, 2019
Wandel & Goltermann Type 25.1 Probe, 300 kHz - 40 GHz	B-0053	February 24, 2019

The FCC standard is a whole-body average exposure standard, so the measurements must be taken over a volume comparable to that occupied by a standing adult. The W&G probe and meter record power density as percent of the FCC controlled environment standard. The W&G meter also performs an automatic average as the user sweeps the volume of interest. To perform a spatial average with the W&G meter, we used either a vertical straight line method (for levels well below FCC limits) or the zig-zag method (for levels approaching the FCC limit) shown in Figure 2.

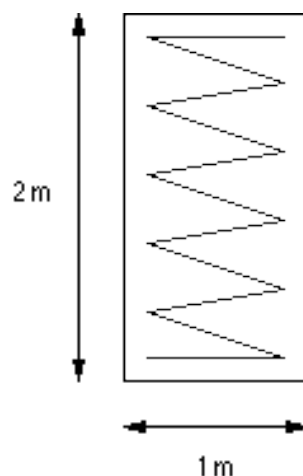


Figure 2 - Zig-zag method for automatic spatial averaging

Measurements were always taken at least 20 cm from reflecting objects in accordance with ANSI C95.3-2002.

Over 50 measurements were collected. Measurement values are shown in Figure 3 (red font) in units of percent of FCC occupational exposure limit. All locations outside the fence measured less than the public exposure limit (20% of occupational) and all locations inside the fence measured below the occupational limit. Locations inside the building measured below 1% of occupational. Note that locations near the building, including the parking area, are low by design due to the azimuth pattern.

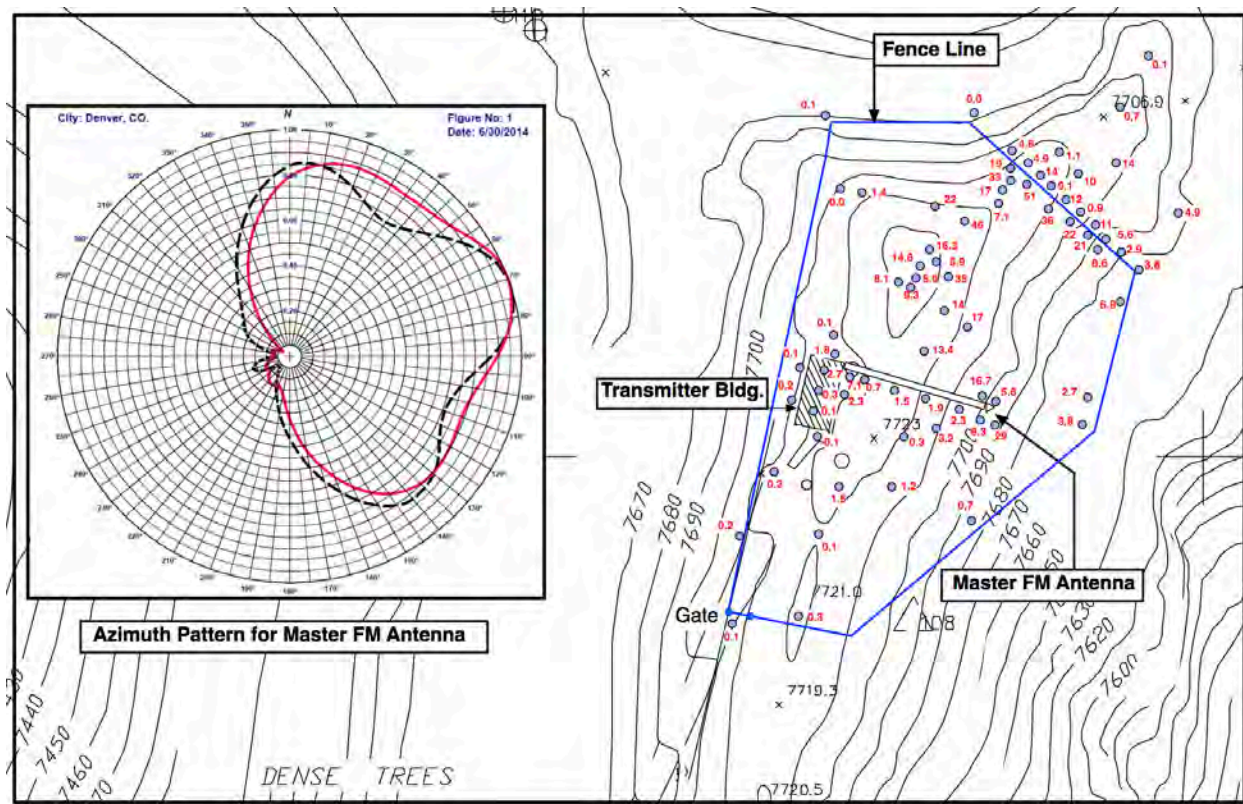


Figure 3 - Measurement Values (Percent of Occupational Limit)

3.0 Conclusions and Recommendations

Spatial average exposure measurements were collected at over 50 locations in the vicinity of the transmit antenna, including the rooftop of the transmitter building. All measurements are below the FCC public exposure limit. The entire facility is enclosed by an 8' high chain link fence with three top strands of barbed wire and the sole vehicle gate is locked at all times when personnel are not working at the facility. We can conclude that the facility complies with FCC Rule Parts 1.1307-1.1310 governing human exposure to radio frequency energy.

We find that additional Notice and Caution signs should be posted so that it is more clear to the public where there is risk of exposure to radio frequency power densities exceeding the public

limit. We recommended the following signs be placed on the site:

- **Blue RF Notice Signs** facing outward at eye level every 50' along the entire perimeter of the existing fence, including one on the gate and one on the fence centered on the ridge (high point). See Figure 3 for a sample sign.
- **Yellow RF Caution Signs** at three locations: on the tower at its base, where the top of the ice bridge meets the tower and where the ice bridge meets the building. Also see Figure 3.



Figure 3 - RF Notice and Caution Signs (Available from Tescos and other distributors)

We understand that the chief engineer of KOSI-FM and site owner are working to have these signs posted as soon as possible with a goal of no later than May 1, 2018.

4.0 References

- [1] ANSI C95.1-2005, "Safety levels with respect to human exposure to radio frequency electromagnetic fields, 3 kHz to 300 GHz."
- [2] OET Bulletin No. 65, FCC, "Evaluating compliance with FCC guidelines for human exposure to radiofrequency electromagnetic fields," Edition 97-01, August 1997.

[3] ANSI C95.3-2010, "Recommended practice for the measurement of hazardous electromagnetic fields - RF and microwave."

[4] ANSI C95.2-1999, "American National Standard radio frequency radiation hazard warning symbol."

[5] Code of Federal Regulation, Title 47, Parts 1.1307 - 1.1310, October 1, 2017.

5.0 Engineer's Statement

Mt. Morrison
Jefferson County, CO

This Maximum Permissible Exposure (MPE) survey addressed electromagnetic radiation in the from 300 kHz to 300 GHz. Fields from extremely low frequency (ELF) sources, such as those emitted by 60 Hz electrical distribution lines, were not measured. Also, induced and contact radiofrequency currents were not measured.

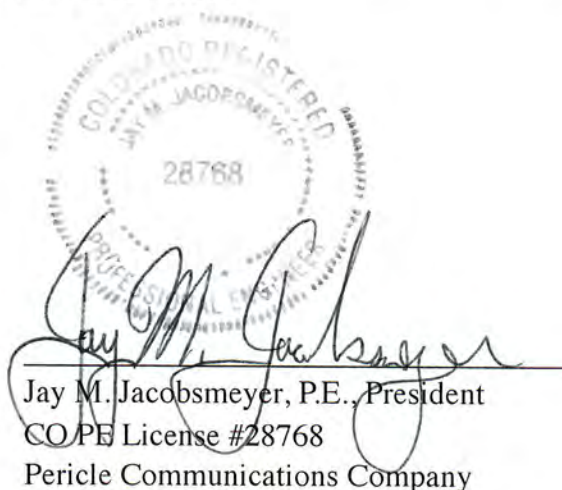
Tower climbers should carry portable power density meters (e.g., Nardalert™) to verify that transmitter powers have been reduced to safe levels before working in the vicinity of high power transmit antennas. Transmission line lockouts are available at this site and should be used when working on the tower.

Measurements were conducted according to procedures described in OET-65, ANSI C95.3-2010 and the user's manual for the meter used. Our conclusions are limited to those locations actually measured or predicted. All measurements were conducted with test equipment assumed to be calibrated and working properly. If new high power transmitters are installed at the site, measured power densities will change.

This survey shows that the new 101.1-FM transmitter facility will comply with FCC guidelines for human exposure to radio frequency energy.

All representations contained herein are true to the best of my knowledge. I am a radio engineer with over 35 years experience. I hold a Bachelor of Science degree in Electrical Engineering from Virginia Tech and a Master of Science degree in Electrical Engineering from Cornell University. I am a corporate officer and stockholder of Pericle Communications Company and a Registered Professional Engineer in the State of Colorado.

Signed this 16th day of April, 2018.



The image shows a circular professional engineer seal for the State of Colorado. The seal contains the text "COLORADO REGISTERED PROFESSIONAL ENGINEER", "JAY M. JACOBMEYER", and the license number "28768". Overlaid on the seal is a handwritten signature in black ink. Below the signature, the following text is printed: "Jay M. Jacobsmeyer, P.E., President", "CO PE License #28768", and "Pericle Communications Company".

Jay M. Jacobsmeyer, P.E., President
CO PE License #28768
Pericle Communications Company