

COMPLIANCE WITH SPECIAL OPERATING CONDITIONS
AND CALCULATION OF TRANSMITTER POWER OUTPUT

The applicant recognizes the responsibility to reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

Special Operating Condition #2: The attached spurious emission measurements taken by James R. Offerdahl of Offerdahl Broadcast Service, Inc. indicate that the authorized W236DF operation complies with the spurious emission requirements of Section 73.317.

Special Operating Condition #3: The attached Technical Statement prepared by William Jeffrey Reynolds, Technical Consultant with du Treil, Lundin & Rackley, Inc., Consulting Engineers demonstrates that the installation of the W236DF antenna on the existing tower will not be a significant modification as defined by 47 CFR 1.30002(d).

Calculation of Transmitter Power Output (TPO): The 0.397 kW (-4.01 dBk) figure is based on consideration of total transmission system attenuation of 2.01 dB (63%). Given an antenna power gain of 1.0 (0 dB), a TPO of 0.397 kW produces the authorized ERP of 0.25 kW (-6.02 dBk).

FM PROOF OF PERFORMANCE

OCCUPIED BANDWIDTH, SPURIOUS EMISSIONS AND HARMONICS

§73.1590 Equipment performance measurements

§ 73.295 FM subsidiary communications services

§ 73.317 FM transmission system requirements

Station Call Sign: W236DF

Facility ID No: 201194

File No: 193075

City of License: Brainerd, MN

Frequency: 95.1MHz

Station Channel: 236

ERP: .250 kW

TPO: .397 kW

ASRN: 1024184

Date of measurements: January 12, 2023

§73.1590 of the FCC Rules require FM radio stations to document compliance with section §73.295 and §73.317 of the FCC Rules. This report contains the results of the measurements performed for this station.

The measurements were performed by James R Offerdahl, Chief Engineer for Offerdahl Broadcast Service, Inc of Fosston, MN. Mr. Offerdahl has been a Broadcast Engineer since 2002.

The transmitter is a Nautel VS1 is fed into a Bext Model FDCSDC05 combiner with collocated with K286DF which also operates with a TPO of .397kW. Also located at same site is translator K210DR which according to its license operates at .115kW TPO and .115kW ERP. Careful attention was paid to the potential for mix products to occur due to the co-location of all three stations.

Spectrum Analysis of Occupied Bandwidth, Spurious Emissions and Harmonics were made with an Anristu MS2721B Spectrum Analyzer at a sample port after all filters.

Harmonic measurements were done with a Microwave Filter Company FM band stop filter with approximately 40 dB of attenuation installed between the sample port and the analyzer in order to prevent the fundamental from overloading the input of the analyzer.

OFFERDAHL BROADCAST SERVICE, INC
705 Eaton Avenue North
Fosston, MN 56542
218.358.0208

FM PROOF OF PERFORMANCE

3rd Order Harmonics were predicted to fall on:

74.7 MHz, 79.9 MHz, 84.7 MHz, 85.1 MHz, 99.9 MHz, 100.3 MHz, 115.1 MHz, 120.3 MHz

Occupied Bandwidth limits are shown in the attached exhibits.

The limit for any harmonic, spurious emission was determined using the formula $43 + 10 \log(397)$ to be 69dBc.

The attached exhibits provide proof that this station is operating in compliance with section 73.1590 Equipment Performance Measurement which requires compliance with 73.295 and 73.317 of the rules and therefore is in full compliance with paragraph 2 of the Special Operating Conditions or Restrictions Section in the Construction Permit.

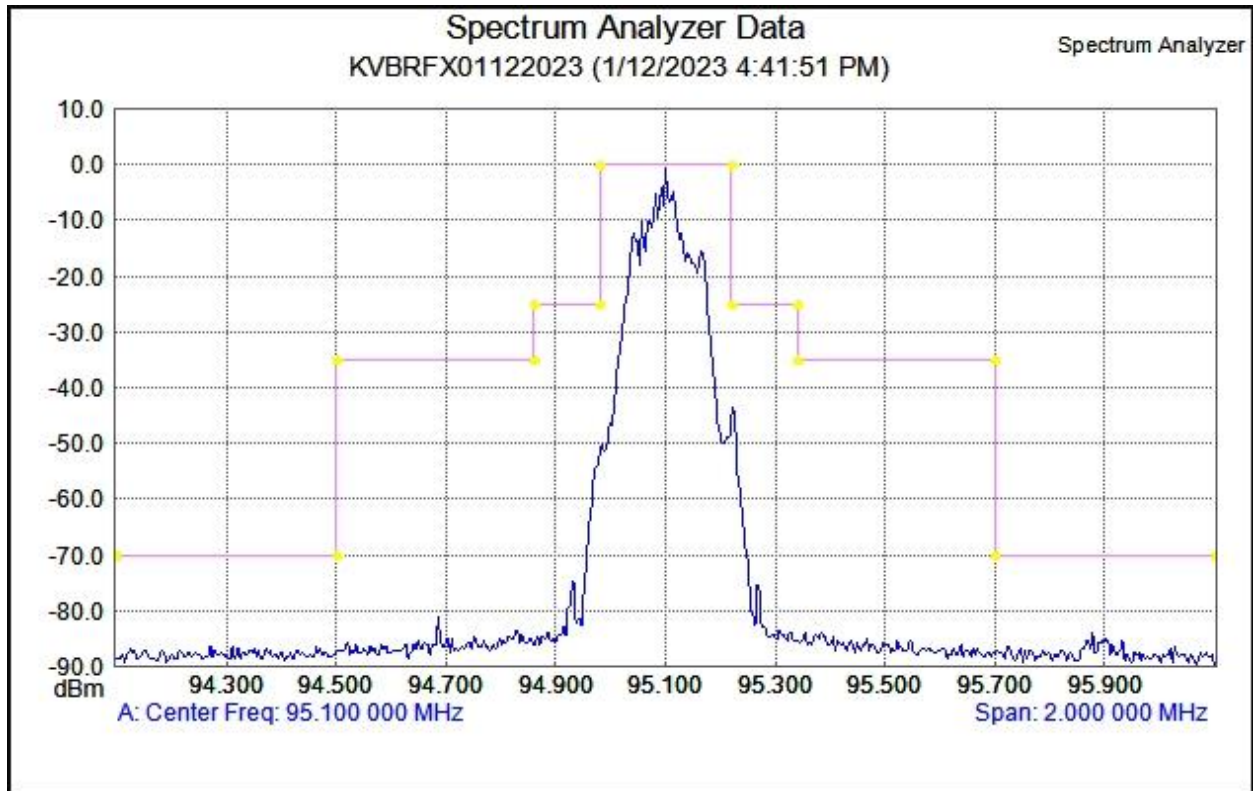
This report is true and correct to the best of my belief.



James R Offerdahl
Offerdahl Broadcast Service, Inc.
705 Eaton Avenue North
Fosston, MN 56542
Phone (218) 358-0208
email: jimofferdahl@gmail.com

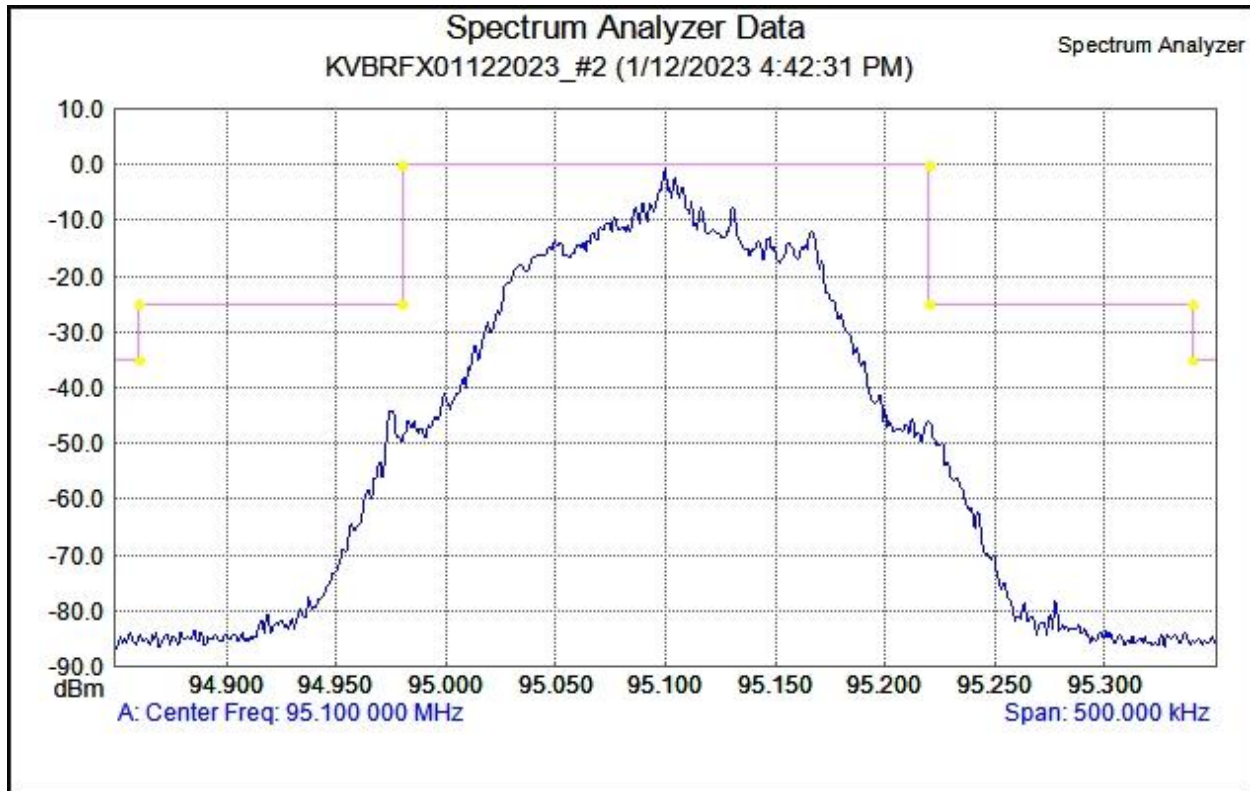
*OFFERDAHL BROADCAST SERVICE, INC
705 Eaton Avenue North
Fosston, MN 56542
218.358.0208*

FM PROOF OF PERFORMANCE



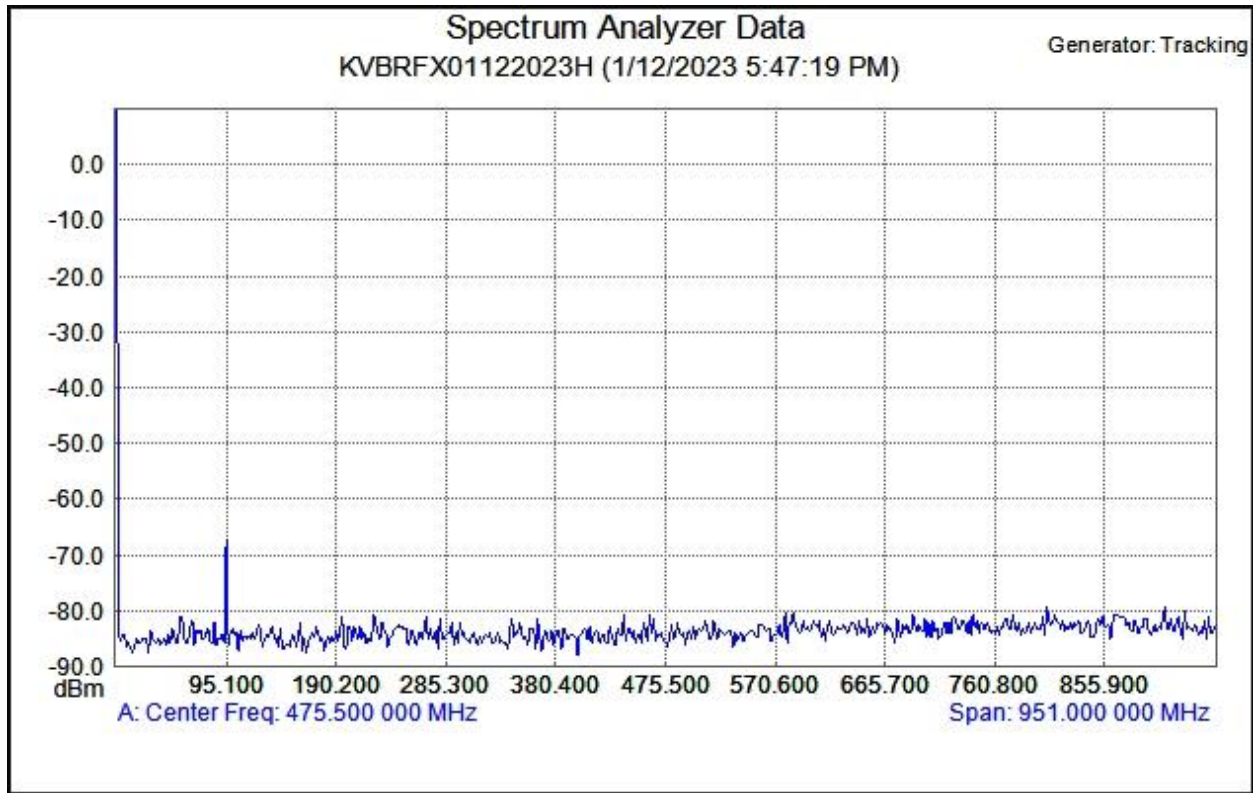
OFFERDAHL BROADCAST SERVICE, INC
705 Eaton Avenue North
Fosston, MN 56542
218.358.0208

FM PROOF OF PERFORMANCE



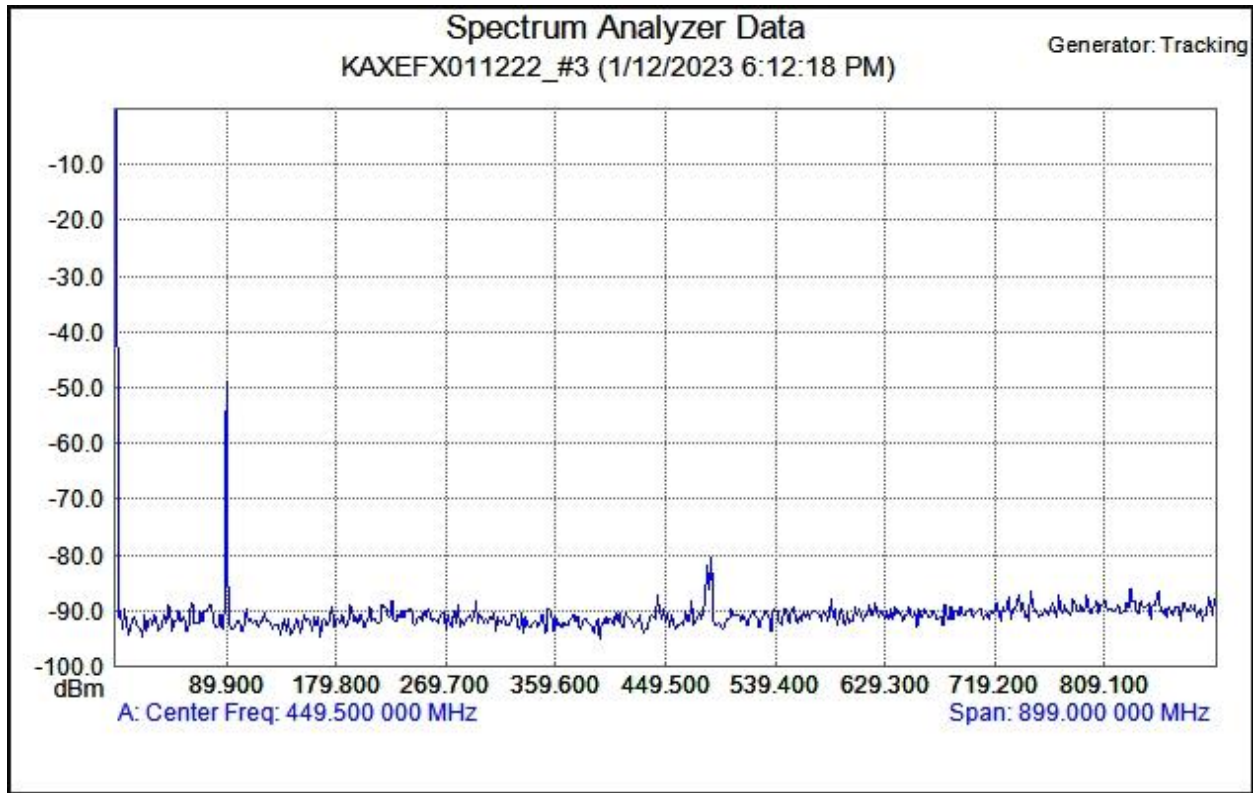
OFFERDAHL BROADCAST SERVICE, INC
705 Eaton Avenue North
Fosston, MN 56542
218.358.0208

FM PROOF OF PERFORMANCE



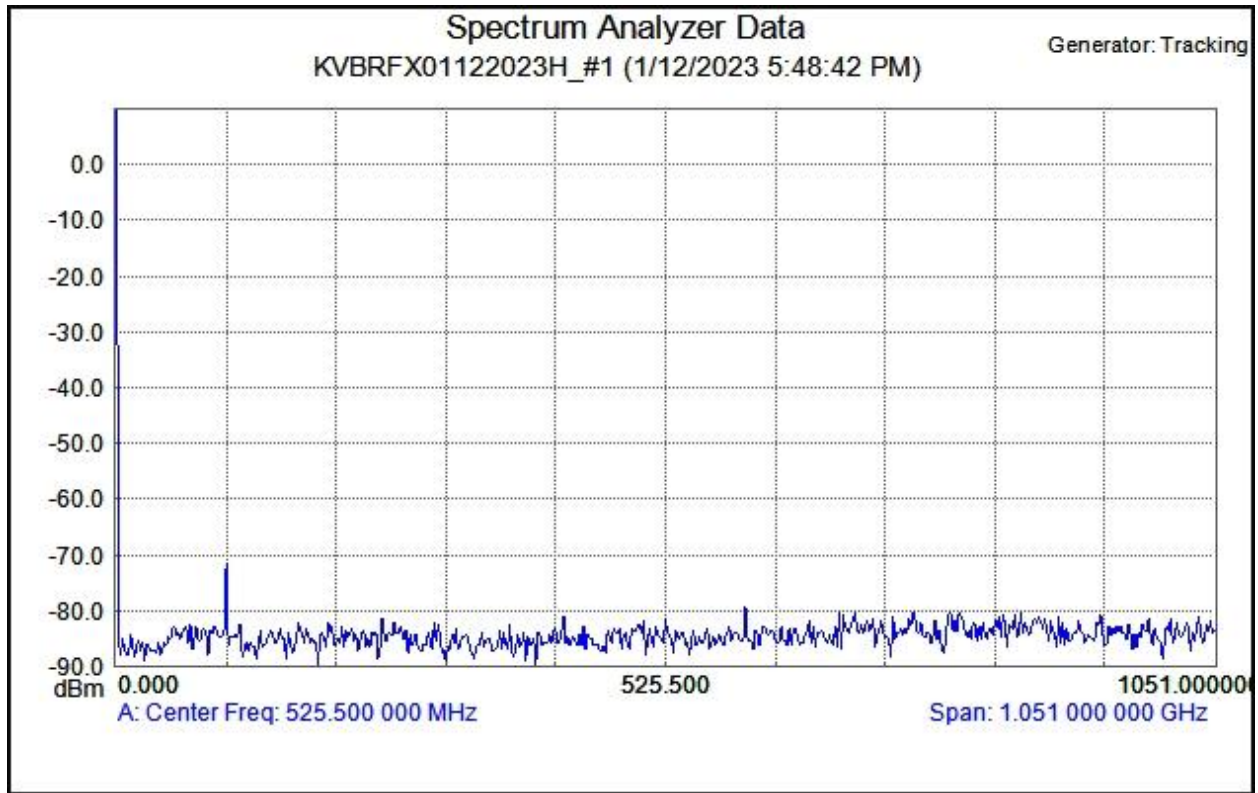
OFFERDAHL BROADCAST SERVICE, INC
705 Eaton Avenue North
Fosston, MN 56542
218.358.0208

FM PROOF OF PERFORMANCE



OFFERDAHL BROADCAST SERVICE, INC
705 Eaton Avenue North
Fosston, MN 56542
218.358.0208

FM PROOF OF PERFORMANCE



OFFERDAHL BROADCAST SERVICE, INC
705 Eaton Avenue North
Fosston, MN 56542
218.358.0208

Technical Statement Regarding LMS File No. 0000193075 – AM Condition

The W236DF Construction permit, LMS File No. 0000193075, includes a special condition requiring a study of the potential impact of the installation of the W236DF antenna on nearby AM radio station KLIZ. The special condition appears on the construction permit because of the height of the W236DF antenna support tower and the distance between the W236DF transmitter site and the licensed KLIZ transmitter site.

The FCC rule that governs such situations, 47 CFR 1.30002(b), requires notification before construction, and an analysis of potential impact, when a new antenna is to be installed on a structure within the lesser of 10 wavelengths or 3 kilometers of a directional AM station, the structure height is taller than 36 electrical degrees at the AM station's frequency, and the installation of the new antenna will be a significant modification of the structure. Although the W236DF antenna will be installed on an existing tower that is taller than 36 electrical degrees, and is closer than 10 wavelengths to KLIZ on 1380 kilohertz, it is exempted from those requirements because installation of the antenna on the existing tower will not be a significant modification as defined in 47 CFR 1.30002(d). Specifically, there will be no increase in the height of the tower, it is grounded, rather than insulated, at its base, and it is not detuned.