

Comprehensive Technical Exhibit
Application for License
K292FZ - Iowa City, Iowa
KZIA, Inc.
December, 2011

Application for License

The following engineering statement and attached exhibits have been prepared for **KZIA, Inc.** ("KZIA"), and are in support of their application for license to cover changes authorized to FM translator station K292FZ at Iowa City, Iowa.¹ The changes were authorized under FCC File No. BPFT-20110928AAZ.

Under the construction permit, KZIA sought a physical relocation of K292FZ to an existing structure closer to Iowa City. As part of this relocation, the technical parameters associated with the facility changed. A change in the community of license was also authorized.

K292FZ was constructed in accordance with the terms of the construction permit. Listed on the construction permit were two special conditions or restrictions. Each of these special conditions or restrictions will be specifically addressed.

The first special condition requires coordination on the part of the licensee with all other users of the site. KZIA certifies it will coordinate with other present and future users of the site to reduce power or cease operation as necessary to protect workers and personnel from being exposed to levels of non-ionizing radiation in excess of the applicable safety standards.

Under the second special condition or restriction, KZIA is required to have this application for license on file prior to the commencement of program tests. Equipment tests have been completed, and KZIA will commence operation under automatic program test authority upon the submission of this application.

¹ The Facility ID for K292FZ at Iowa City, Iowa is 153604.

The specified transmitter power output achieves the authorized effective radiated power. The authorized effective radiated power for the facility is 175 Watts. The antenna utilized is an ERI 100A-2F antenna, which has a manufacturer specified gain of 0.8970. Thus, the input power to the antenna required to achieve the authorized effective radiated power is 195.1 Watts.

Ahead of the antenna is the run of transmission line, which consists of 295 feet of Andrew/Commscope LDF7-50A semi-flexible foam dielectric coaxial cable. Data from the manufacturer lists 0.8598 as the decimal efficiency for this run of transmission line. The input to the transmission line to achieve the authorized effective radiated power is 226.9 Watts.

Between this run of transmission line and the translator is a jumper, which has a decimal efficiency of 0.9400. The necessary input to the jumper, to achieve the necessary input power to the transmission line, is 241 Watts. The input to the jumper is the output of the translator, thus the specified transmitter power output achieves the authorized effective radiated power.

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature
License Expires November 30, 2013

Jeremy D. Ruck, PE
December 5, 2011