

# *APPLICATION FOR LICENSE*

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WIFI(FM) - WATSEKA, ILLINOIS  
FACILITY ID: 164237

RADIOACTIVE, LLC

JUNE, 2015

## **APPLICATION FOR LICENSE**

The following engineering statement and related exhibits have been prepared for **Radioactive, LLC** ("Radioactive"), licensee of FM broadcast station WIQI(FM) at Watseka, Illinois, and are in support of their application for license to cover authorized changes to that facility.<sup>1</sup> This application for license seeks to cover construction authorized under FCC File No. BPH-20150323AAB.

The facility as authorized and constructed operates on FM channel 240 with an effective radiated power of 6 kW. The facility utilizes a non-directional Electronics Research, Inc. (ERI) LPX-3E antenna, which consists of three sections spaced one-wavelength apart. The antenna utilized does not employ beamtilt.

The main studio for the facility complies with the provisions of Section 73.1125 of the Commission's Rules. The main studio is located within the corporate limits of Watseka, Illinois, the community of license. Additionally, this location also places the main studio within the predicted 70 dBu service contour of the facility.

The specified transmitter power output achieves the authorized effective radiated power. The authorized effective radiated power is 6 kW. The manufacturer of the antenna specifies 1.5588 as the numerical power gain of the antenna. Therefore, the antenna input power required to achieve the authorized effective radiated power is 3.85 kW.

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<sup>1</sup> The Facility ID for WIQI(FM) at Watseka, Illinois is 164237.

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Ahead of the antenna is the transmission line run, which consists of 295 feet of Andrew/Commscope HJ7-50A semi-flexible air-dielectric coaxial cable. Data from the manufacturer of this line indicates that at the frequency of operation, this run has an insertion loss of 0.63 dB, which corresponds to an efficiency of 86.50 percent. The input power to the transmission line to achieve the authorized effective radiated power is 4.45 kW. The input to the line is the output of the transmitter. Therefore, the specified transmitter power output achieves the authorized effective radiated power.

The facility was constructed in accordance with the terms of the construction permit. The permit, as issued by the Commission, listed three special conditions or restrictions. Radioactive would be in compliance with each of these conditions.

The first special condition pertains to radiofrequency radiation protection of workers and other personnel. Under this condition, Radioactive must coordinate with all other users of the site to ensure that human exposure to radiofrequency radiation in excess of the applicable safety standards does not occur. Radioactive certifies that it will perform necessary coordination activities, which may include, but are not necessarily limited to, a reduction in transmitter power or cessation of operation.

The second special condition or restriction is a notification to the licensee that the grant of this construction permit is pursuant to Section 73.215 of the Commission's Rules, and was requested by the applicant. No additional action with regard to this condition is required.

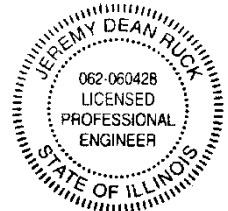
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The final special condition pertains to the silence authority for WIQI granted Radioactive. This condition advises the applicant that if operation of the facility does not commence prior to January 28, 2016, the expiration date of the underlying construction permit notwithstanding, the WIQI license will expire as a matter of law. Radioactive is cognizant of this condition, and due to the completion of construction on the new facilities will resume operation well in advance of the license expiration date.

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, 2015

Jeremy D. Ruck, PE  
June 22, 2015

JEREMY RUCK & ASSOCIATES, INC.

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