APPLICATION FOR LICENSE

LPFM STATION
WNBI-LP - NEW BUFFALO, MICHIGAN
FACILITY ID: 194898

NEW BUFFALO AREA SCHOOLS

OCTOBER, 2015

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APPLICATION FOR LICENSE

The following engineering statement has been prepared for **New Buffalo Area Schools** ("New Buffalo"), permittee of new low-power FM station WNBI-LP at New Buffalo, Michigan, and is in support of their application for license.[1] The file number of the most recent construction permit for WNBI-LP is BMPL-20150331ABN. This application seeks to cover the construction authorized under that permit, which has been completed. That construction permit was a modification of the original proposed engineering. WNBI-LP has commenced operation under the provisions of automatic program test authority.

The facility as constructed complies with the terms of the construction permit. The permit, as issued by the Commission, lists one special condition or restriction. New Buffalo certifies that it will comply with this special condition, which requires coordination with all other users of the site to ensure workers and other personnel are not exposed to levels of radiofrequency radiation in excess of the applicable safety standards. Such coordination activities will include, but are not necessarily limited to, a reduction in transmitter power or cessation of operation.

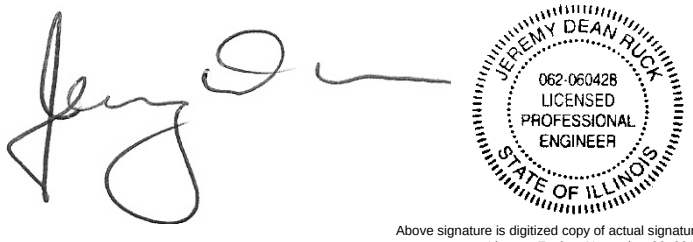
The specified transmitter power output achieves the authorized effective radiated power. The authorized effective radiated power is 100 Watts. The antenna utilized by the facility is a Systems With Reliability (SWR) model FM1/1. The manufacturer of this antenna specified 0.441 as the power gain. The input power to the antenna to achieve the authorized effective radiated power is 226.8 Watts.

[1] The Facility ID for WNBI-LP at New Buffalo, Michigan is 194898.

Ahead of the antenna is the run of transmission line, which consists of 150 feet of Andrew/Commscope LDF4-50 semi-flexible foam-dielectric coaxial cable with a one-half inch nominal diameter. This length of line has an insertion loss of 1.06 dB based on data from the manufacturer.[2] This insertion loss translates into an efficiency of 78.34 percent. The input power to the transmission line to achieve the authorized effective radiated power is 289.4 Watts

Preceding the transmission line is a Polyphaser lightning protection device. This device has a nominal insertion loss of 0.1 dB, which translates to an efficiency of 97.72 percent. The input power to the Polyphaser to achieve the authorized effective radiated power is 296.2 Watts, which rounds to 296 Watts. The input to the Polyphaser is located at the output of the transmitter. Thus, the specified transmitter power output achieves the authorized effective radiated power.

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



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License Expires November 30, 2017

Jeremy D. Ruck, PE
October 30, 2015

[2] Manufacturer data based on authorized operating frequency of 107.9 MHz.