

THOMAS M. ECKELS, PE
STEPHEN S. LOCKWOOD, PE
DAVID J. PINION, PE
ERIK C. SWANSON, PE

THOMAS S. GORTON, PE

JAMES B. HATFIELD, PE
BENJAMIN F. DAWSON III, PE
CONSULTANTS

HATFIELD & DAWSON
CONSULTING ELECTRICAL ENGINEERS
9500 GREENWOOD AVE. N.
SEATTLE, WASHINGTON 98103

TELEPHONE (206) 783-9151
FACSIMILE (206) 789-9834
E-MAIL hatdaw@hatdaw.com

MAURY L. HATFIELD, PE
(1942-2009)
PAUL W. LEONARD, PE
(1925-2011)

**Engineering Statement
KZBQ Channel 230C0 Pocatello, Idaho
Request for -10 dBc Hybrid Digital Operation
June 2019**

This Engineering Statement has been prepared on behalf of Idaho Wireless Corporation ("Idaho Wireless"), the licensee of FM station KZBQ, which operates on Channel 230C0 at Pocatello, Idaho, in support of a request to operate KZBQ at -10 dBc in hybrid digital mode.

Digital operation will be via the main KZBQ antenna system (see BLH-20161213ABJ). The KZBQ analog ERP is 100 kW. Digital ERP will be 10 kW.

In support of the request to operate with -10 dBc, the undersigned conducted a study which took into account the first-adjacent channel operations in the vicinity.

Channel 229: The nearest station is 326 kilometers away (KOBH-FM 229C1 Bozeman), which is not close enough to warrant the inclusion of a contour map exhibit in this Engineering Statement.

Channel 231: The nearest station is 246 kilometers away (KODJ 231C Salt Lake City). The attached contour map demonstrates that the 49.5 dBu F(50,10) contour from the proposed digital operation does not overlap the 60 dBu F(50,50) contour of the first-adjacent channel station.

RF Exposure Considerations

Ground-level RF exposure measurements were conducted by SWE Services, LLC in December 2016, in connection with licensing of the main KZBQ antenna system. A report detailing those measurements was included in the KZBQ license application, and can be located in the Commission's Consolidated Database System under FCC File No. BLH-20161213ABJ. The following analysis is based on the results of those measurements.

The 2016 measurements identified a local maximum of 43.9% of the FCC standard for uncontrolled environments, from simultaneous operation of all stations at this site. At that location, the contribution from KZBQ alone was determined to be 16.8% of the FCC standard for uncontrolled environments. At the location found with the greatest contribution from KZBQ alone, that contribution was found to be 18.2% of the FCC standard for uncontrolled environments.

A 10% increase in the total ERP of KZBQ (to account for the additional power from -10 dBc hybrid operation) would increase the total by only about 1.8 percentage points, which would not push the site over the FCC standard for uncontrolled environments.

The Howard Mountain transmitter site is located in a mountainous region of eastern Idaho. The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency exposure in excess of FCC guidelines.

Statement of Engineer

This Engineering Statement has been prepared by me or under my direct supervision. I am a Partner in the firm of Hatfield & Dawson Consulting Engineers, and am registered as a Professional Engineer in the State of Washington. I hereby declare that the facts set out in the foregoing Engineering Statement, except those of which official notice may be taken, are true and correct.

Signed this 6th day of June, 2019



Erik C. Swanson, P.E.

