

**MODIFY BPCDT-20080321ACM**  
**J.F. BROADCASTING, LLC**  
**KWSD-DT TELEVISION STATION**  
**CH 36 - 602-608 MHZ - 36.9 KW (DA)**  
**SIOUX FALLS, SOUTH DAKOTA**  
**December 2009**

**TECHNICAL STATEMENT**

This Technical Statement and attached exhibits were prepared on behalf of J.F. Broadcasting, LLC ("JFB"), licensee of KWSD-DT, Channel 51, Sioux Falls, South Dakota. JFB also holds a construction permit for a post-transition DT facility on Channel 36 at Sioux Falls, South Dakota (BPCDT-20080321ACM). JFB herein proposes to modify its outstanding Channel 36 permit to lower the maximum effective radiated power from 400.0 kilowatts to 36.9 kilowatts. This reduction will allow JFB to implement service on Channel 36 with equipment on hand and allow KWSD-DT to be licensed on its final digital channel.<sup>1</sup> Once this proposed facility is implemented, JFB intends to submit an application for a new permit for KWSD-DT to operate with 400.0 kilowatts.<sup>2</sup>

The proposed KWSD-DT facility will utilize the existing KWSD analog directional antenna system already mounted on the tower. The data relating to the directional antenna system is attached hereto as Exhibit A. An interference review of the operation of digital Channel 36 was undertaken. The proposed Channel 36 digital operation complies with the

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- 1) JFB plans on converting its Channel 51 digital 1.0 kilowatt transmitter to Channel 36. Implementation of the KWSD-DT 400.0 kilowatt permit would have required the purchase of a new DTV transmitter or a major conversion of the former Channel 36 analog transmitter.
  - 2) This proposal is for an interim facility to allow for the licensing of Channel 36 digital and the discontinuation of digital operation on Channel 51.



Commission's interference rules, based on the use of the Longley-Rice, OET-69 Bulletin.<sup>3</sup> It is noted that the terrain was sampled at 0.1 kilometer, and a signal cell size of 1.0 kilometer was used, with 2000 Census population reviews. Attached as Exhibit B is a tabulation of the results of the Longley-Rice review showing the proposed facility causes no interference to any other existing, applied for or proposed facility, based on the database used on the indicated study date. No full service station receives predicted interference above 0.5% of its population from this proposed facility. As indicated in Exhibit C, the proposed KWSD-DT facility will not exceed the radio frequency exposure limits.

It is noted that the proposed 41 dBu contour KWSD-DT facility on Channel 36 will not encompass the entire 41 dBu contour of the operating Channel 51 digital facility, as indicated on Exhibit D. There are two small areas which will no longer receive a 41 dBu signal from the KWSD-DT facility. These areas, which contain 1,648 persons, are both outside the Sioux Falls, South Dakota DMA. Further, the proposed KWSD-DT facility on Channel 36 will increase its population within the predicted 41 dBu contour by 19,435 persons, 18,937 persons of this total are within the Sioux Falls, South Dakota DMA.<sup>4</sup>

It is noted that the existing/proposed KWSD-DT facility is located within 3.2 kilometers of directional AM station KXRB, 1000 kHz, Sioux Falls, South Dakota. As JFB intends to use the existing installed KWSD analog antenna and associated transmission line, there will be no

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3) The Longley-Rice model was implemented on the Probe 3 computer model from V-Soft Communications. This model has been found to closely replicate the results provided by the Commission's computer model.

4) The small areas of loss will be encompassed by a KWSD-DT facility operating at 400.0 kilowatts.



tower construction will be required. Therefore, KXRB will not be impacted by this proposed facility. JFB, therefore, requests that the herein requested permit have no pre- or post-construction field strength measurement requirements regarding KXRB. All remaining exhibits used to prepare this application have been provided to JFB and are available for submission to the Commission upon request.<sup>5</sup>

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5) The undersigned has evaluated only the radio frequency radiation exposure limits of this proposal. All data regarding broadcast facilities was extracted from the CDBS database on the date of the studies contained herein. We assume no liability for errors or omissions in that database that may be adverse to the requests contained herein.