

APPLICATION FOR STATION LICENSE
RAPID BROADCASTING COMPANY
KNBN-DT TELEVISION STATION
CH 21 - 512-518 MHZ - 50.0 KW (H)/7.6 KW (V)
RAPID CITY, SOUTH DAKOTA
January 2009

TECHNICAL STATEMENT

This Technical Statement and attachments were prepared on behalf of Rapid Broadcasting Company ("Rapid"), licensee of NTSC television station KNBN, Channel 21-, Rapid City, South Dakota. Rapid holds an outstanding construction permit for KNBN-DT, Channel 21, Rapid City, South Dakota (BPCDT-20080215AJT). This instant application seeks a license to cover this outstanding construction permit for the digital facility.

Construction of the KNBN-DT facility has been completed and the station is operating pursuant to automatic program test authority. Attached as Exhibit A is a calculation of the transmitter output power for KNBN-DT.¹ The KNBN-DT facilities have been constructed as authorized in the underlying permit, and the conditions on the permit have been met. As indicated on Exhibit C, the operation of KNBN-DT on Channel 21 in Rapid City, South Dakota does not impact any pre-transition analog or digital TV facilities, nor any other digital facilities, based on the use of the Longley-Rice/OET Bulletin 69 criteria.²

It is noted that the KNBN-DT antenna, Dielectric Communications Model TFU-25JTH/VP-R-04, is an elliptically polarized system, containing both horizontal and vertical polarization. The maximum effective radiated power of KNBN-DT is 50.0 kilowatts horizontal and 7.6 kilowatts vertical.

1) The vertical elevation pattern of the KNBN-DT antenna system is attached as Exhibit B. The system employs an electric beam tilt of 0.75°

2) KNBN-TV's analog facility is also authorized on Channel 21.