SIDLEY AUSTIN BROWN & WOOD LLP

MEMORANDUM

TO: Johanna Mikes-Shelton

FROM: Tom Van Wazer

RE: Rapid City, South Dakota Distributed Transmitter Information

DATE: August 2, 2004

As requested, attached please find three coverage maps and a corresponding table of population coverage for a DTV station in Rapid City, South Dakota using a hypothetical Distributed Transmitter. The information in the attached materials was prepared for KCLO-DT, channel 16, Rapid City, South Dakota. KCLO is not a client of Mr. Weiss or this firm and has neither reviewed nor endorsed this analysis.

Here is a brief description of the attached materials:

Map page 1: the blue line represents the predicted coverage contour of KCLO-DT's currently authorized facility; the red line represents the predicted interference contour of KCLO-DT's currently authorized facility; the various colors moving out from the center of map represent the predicted Longley-Rice coverage of KCLO-DT's currently authorized facility. KCLO-DT's currently authorized facility has an ERP of 200 kW and an HAAT of 154 meters. The green line all-around the coverage area represents the boundaries of KCLO's DMA.

The signal strengths of the different colors in the Longley-Rice coverage are identified in the table. The yellow area (>80 dBu) is where reliable indoor, set-top reception would most likely occur; the orange area (70-80 dBu) would provide indoor, set-top reception in many areas; the red area (60-70 dBu) would provide only occasional indoor, set-top reception; the green area (48-60 dBu) would provide reliable reception using an outdoor antenna; and the cyan (light blue) area would provide reception using an outdoor antenna in 50 percent of locations.

Map page 2: includes the same lines from the map on page 1 for KCLO-DT's currently authorized facility plus similar coverage/interference contours and Longley-Rice coverage for a hypothetical Distributed Transmitter located in Lead, South Dakota. No *de minimis* (i.e. 2%/10%) analysis was done on this hypothetical coverage. Thus, the actual coverage achievable might be reduced, although it is unlikely in this market. The hypothetical Distributed Transmitter uses an existing television transmission site with an ERP of 10 kW and an HAAT of 538 meters.

Map page 3: includes the same coverage/interference contours and Longley-Rice coverage for KCLO-DT's currently authorized facility and the hypothetical Distributed Transmitter in Lead, South Dakota, plus the coverage and interference contours of a hypothetically maximized DTV station (assuming the maximum ERP and HAAT specified in the

FCC's rules) operating from the transmitter site specified for KCLO-DT's currently authorized facility.

The hypothetically maximized KCLO-DT coverage and interference contours were added to Map 3 to illustrate that the extra coverage provided by the Distributed Transmitter does not exceed the interference contours of the hypothetically maximized facility KCLO-DT would be permitted to operate under the rules using a single, high-powered transmitter. Map 3 also illustrates how a limit requiring that the service contour of a Distributed Transmitter stay within a station's currently protected contour would practically eliminate the usefulness of a Distributed Transmission system in circumstances like these.

Table, page 1: the first two columns include the 1990 household (HH) and population statistics for all the counties in the Rapid City DMA that have or will receive service from KCLO-DT in this example. (These are summarized by state at the top of the column of counties in each state.) The next two columns show the population (by county) predicted using Longley-Rice to have indoor, set-top reception (> 80 dBu field strength) from the currently authorized KCLO-DT facility and then the population predicted to have indoor reception combining KCLO-DT's currently authorized facility with the hypothetical Distributed Transmitter. The last two columns show the population predicted using Longley-Rice to have outdoor reception (> 41 dBu field strength) from the currently authorized KCLO-DT facility and then population receiving service combining its currently authorized facility plus the hypothetical Distributed Transmitter.

Table, page 2: shows summary population coverage numbers for the currently authorized KCLO-DT facility, the population numbers when the Distributed Transmitter is added, the increase to the population coverage resulting from addition of the Distributed Transmitter, and then the population coverage percentage increases. You will see that the Distributed Transmitter increases the population in the DMA predicted to have set-top reception by 8.6 percent and increases the population in the DMA predicted to receive service by 26.5 percent. These gains were achieved without exceeding the interference contour of a hypothetically maximized facility for KCLO-DT. Additionally, these gains were achieved while ensuring that 70 percent of the population receiving new service from the Distributed Transmitter were in KCLO-DT's DMA.

The design depicted in the maps and accompanying tables has not been optimized for a Distributed Transmission system. It has been put together only to illustrate the benefits from a Distributed Transmitter in a rural market like Rapid City and to portray some of the limitations that might result from different policy choices with respect to the rules eventually adopted by the Commission to enable use of Distributed Transmission.