

JEFFREY G. DRESS  
Proposed New AM Radio Station  
Fargo, North Dakota  
740 kHz 50 kW-D, 8.8 kW-CH, 1.0 kW-N, DA-3, U

ENGINEERING STATEMENT

This engineering statement, together with the attached figures, has been prepared on behalf of Jeffrey G. Dress, in support of an amendment to a pending application (file# BNP-20010703AAO, facility # 135847) for a new AM radio station to be licensed to Fargo, North Dakota.

This amendment replies to an FCC letter of May 13, 2002, concerning the above-referenced construction permit application, which raised several alleged engineering defects in the instant AM application. These matters our office has researched and will address individually.

DAYTIME INTERFERENCE

The letter of May 13<sup>th</sup> alleges that the proposal's 0.5 mv/m daytime groundwave contour would overlap the authorized 0.5 mv/m daytime groundwave contour of first-adjacent Canadian station CKDM, 730 kHz, Dauphin, Manitoba, in contravention of the U.S. - Canada Agreement. In addition, the Commission's letter alleges the proposal's 0.5 mv/m daytime groundwave contour would receive interference from the 0.25 mv/m groundwave contour of CKDM, in contravention of § 73.37 of the Commission's rules.

Subsequent to the letter's receipt, the undersigned conferred with the application's processing engineer. Following a review of the daytime interference issue by both FCC staff and our office, the processing engineer responded that the FCC groundwave program had apparently utilized the wrong set of soil conductivity curves. After employing the proper set of curves, the processing engineer advised the undersigned that there no longer was any problem with alleged daytime groundwave interference as it impacts CKDM. It is noted that the conclusion confirms the analysis provided in Figure 9B, the "Canadian Daytime Allocation Study" provided with Mr. Dress's referenced application.

With regard to the second daytime interference issue, namely that of alleged received daytime groundwave interference from CKDM, attention is directed to Page 1 of the Engineering Statement which accompanied the filing for Mr. Dress's application. In that statement, this office requests a waiver of § 73.182(q) of the rules regarding daytime received interference from CKDM. A review of the rules indicates the waiver is more properly directed to § 73.37, the section cited in the letter of May 13<sup>th</sup>. It should be noted that the Commission has previously granted similar waivers for other of this office's clients when a newly proposed or modified domestic AM facility would receive interference from (but not contribute interference to) a Canadian facility providing the 1:1 first-adjacent interference standard was not exceeded. [ See: BP-19970328AB, Koor Communications, Inc., Proposed New AM (WQTH), Hanover, NH; BP-19960205AA, Lloyd Lane, Inc., Radio Station

WCJW, Warsaw, NY; and BP-19940207AD, also BMP-19981005AB, Radio Livingston, Ltd., Radio Station WYSL, Avon, NY.] Requested waivers for these stations were certainly in the public interest and would also be in the public interest for Mr. Dress's new facility at Fargo, ND. Accordingly, it is respectfully requested that Mr. Dress's application for a similar waiver be entertained.

#### NIGHTTIME INTERFERENCE

The letter of May 13<sup>th</sup> alleges "... the proposed 0.025 mv/m 10% skywave contour would overlap the 0.5 mv/m 50% skywave contour of a co-channel Canadian Class A station CBL, Toronto, Ontario, in violation of the US/Canadian Agreement."

The applicant and this office recognize the need to provide the cited nighttime interference protection to the notified facilities of CBL, now CHWO, Toronto, ON. According to Annex 2, Chapter 4, paragraph 4.10.2.2 of the US/Canada Agreement of 1984, the 0.5 mv/m 50% skywave contour and the 0.5 mv/m groundwave contour of CBL (CHWO) must be protected within Canadian territory; and where said contours are truncated at the US-Canada border, the CBL (CHWO) signal, skywave or groundwave, must be protected on a 20:1 ratio.

This office has revisited the detailed nighttime peripheral study (also referred to as a clipping study) performed on CBL and embodied in Figures 13, 14, 15A-C, 19 and 20 of the referenced application. Staff have recalculated CBL protection requirements, reviewed computer tabulations and maps furnished by the FCC processing engineer and sought clarification from the Commission's International Bureau staff.

According to this office's recalculation of protected contour (0.5 mv/m 50% skywave) and US-Canada border points (where the CBL protected contour is truncated), this office has discovered no error which would prevent this proposal's compliance with the letter of the US-Canada Agreement. However, the re-analysis has uncovered an anomaly unique to this proposal and its close proximity to the US-Canada border. Whereas this proposal would appear to protect the pertinent CBL (CHWO) border points on the required 20:1 ratio, other, higher, CBL signal strengths farther within Canada might not be protected at the same 20:1 standard. Often, the proposal's nighttime vertical radiation will "notch" inward at angles pertinent to protecting the Canadian border, but radiate somewhat more signal at lower vertical angles applicable to reception points within Canada.

A careful reading of Paragraph 4.10.2.2 of the US/Canada Agreement does not immediately suggest that such an anomaly violates the letter of that Agreement. However, in a conversation June 7, 2002 with the Commission's International Bureau, the undersigned was advised that Commission policy encourages the higher standard of compliance, thus requiring proposals, such as that of Mr. Dress, to protect not only the 0.5 mv/m 50% skywave or 0.5 mv/m groundwave contours of Canadian Class A stations but also stronger signal strengths within the protected Class A contour should a proposal's unique vertical radiation characteristics pose a risk of interference beyond the 20:1 ratio.

Accordingly, the applicant, through this consulting firm, has amended Jeffrey Dress's referenced application to specify nighttime operating power of 1.0 kW versus 1.4 kW, then slightly

reshape the nighttime standard pattern in such a way that the CBL nighttime skywave and groundwave signals are appropriately protected in conformance with both the US/Canada Agreement and Commission policy. Figures 13A and 13B Amended and Figure 15D Amended document supplemental CBL protection points to demonstrate the proposed Fargo nighttime pattern does not exceed the 20:1 ratio protection requirement.

Figure 21A, 21B and 21C Amended are generated by a proprietary contour allocation study program that show the actual extent of the proposed Fargo 10% nighttime 0.025, 0.030 and 0.035 mv/m skywave contours toward the CBL 50% 0.5, 0.6 and 0.7 mv/m skywave contours. It will be noted that the oblong portion of the Fargo 10% 0.025 mv/m skywave contour within the CBL 50% 0.5 mv/m contour is well within the 0.5 mv/m contour periphery and thus does not exceed the 20:1 ratio. Also noted will be the oblong portion of the Fargo 10% 0.030 mv/m skywave contour which is still well within the CBL 50% 0.6 mv/m skywave contour and does not exceed the required 20:1 ratio. The map in Figure 21C Amended shows the proposed Fargo 10% 0.035 mv/m skywave contour does not enter the CBL 50% 0.7 mv/m skywave contour anywhere within Canadian land area.

These above mentioned maps are extremely important in demonstrating protection of the CBL (CHWO) nighttime service area and should be forwarded to Industry Canada for concurrence. It is pointed out that the typical computer programs for evaluating overlap of a proposed contour to a licensed protected contour will give an erroneous conclusion of impermissible overlap and will not accurately show oblong 10% contour areas which still comply with the 20:1 protection ratio. This office has a mapping program that depicts the same type of contour as does the FCC overlap program but in this unique case, it cannot be applied without giving a false conclusion.

### CRITICAL HOURS

In the letter of May 13<sup>th</sup>, the Commission notes that the coordinates for the proposed critical hours operation differ from that of the daytime or nighttime proposals. The discrepancy results from a simple typographical error on Figure 8D, the "Proposed Critical Hours Horizontal Plane Standard Pattern" polar graph. The correct pattern coordinates are N 46-58-29 W 96-30-12 (not 86-30-12). A corrective amendment of Figure 8D is included in this filing.

### CANADIAN CONCURRENCE

It is respectfully requested that this amendment to the Jeffrey G. Dress application, along with the original application, be sent to Industry Canada for concurrence.

July 9, 2002

  
William J. Sitzman  
Consulting Engineer