

Exhibit 7.0 – Discussion

The present licensed KFNW-FM antenna, a Harris Model FMH-8AC6, is being replaced with an ERI Model SPHX-10AC6-SP. The present antenna is shared with one other broadcast facility; the replacement antenna will be shared with two other stations. Both antennas are omnidirectional.

The present antenna is mounted 308 meters above ground level (AGL). In 1995, when the application for the present license was filed, the ground elevation was believed to be 287 meters above mean sea level (AMSL). This placed the antenna center of radiation (COR) at 595 meters AMSL and 305 meters height above average terrain (HAAT).

The top bay of the replacement antenna will be mounted in the same location as the top bay of the licensed antenna. Because the replacement antenna has two additional bays, its center of radiation will be lowered to 304.8 meters AGL rather than the present 308 meters.

Subsequent to filing the 1995 application for license, the KFNW-FM tower was registered and assigned Antenna Structure Registration (ASR) Number 1046928. As part of the registration process, the licensee had the structure surveyed to be certain the registration data was accurate. Slight variations were found compared to the data used for the license application. The licensee requests the KFNW-FM record be updated to reflect the tower registration data.

The ASR shows a site elevation of 288.7 meters AMSL. When added to the height above ground, the AMSL COR of the replacement antenna will be 593.5 meters, or 594 meters when rounded to the nearest whole meter. The HAAT will decrease by 1.3 meters to 303.7 meters. The height of the replacement antenna therefore complies with the +2/-4 meter window provided in §73.1690(c)(1). No change in effective radiated power (ERP) is requested.

The survey data used for tower registration also revealed a slight discrepancy in the coordinates for the KFNW-FM tower. The NAD83 coordinates used for registration are: 47-00-36.0 NL and 97-11-42.0 WL. When converted to NAD27 for use with the Media Bureau, these coordinates become: 47-00-36 NL and 97-11-41 WL. These are within 1 second each of the licensed coordinates of 47-00-37 NL and 97-11-40 WL. The attached *Exhibit 7.1* shows the corrected coordinates are fully spaced to all other authorized facilities. Since there is no change in actual physical location or ERP, this correction of coordinates can be made using Form 302-FM as authorized by §73.1690(c)(11).

With the addition of a third FM station to the operation, the antenna feed system is being replaced. The transmission line will consist of 1004.6 feet (306.2 meters) of Myat 6 1/8" rigid line. At the KFNW-FM operating frequency of 97.9 MHz, the manufacturer lists a loss of 0.04791 dB per 100 feet. The total line loss would therefore be 0.4813 dB yielding an efficiency of 89.51%. After adjusting the combiner, the manufacturer, ERI, measured its insertion loss at 97.9 MHz as 0.156 dB for an efficiency of 96.47%. The antenna power gain is 5.68. Thus, a transmitter power output (TPO) of 20.4 kW will be required to produce the licensed 100 kW ERP. This change in ERP is authorized by §73.1690(c)(10).

The provisions of §73.1690(c) also require an exhibit showing compliance with the FCC guidelines for human exposure to radiofrequency radiation. A study for the replacement configuration is shown in *Exhibit 7.2*. In addition, *Exhibit 7.3* tabulates the existing licensed parameters and the revised parameters reflecting the updated site data and replacement antenna. The applicant requests a replacement license reflecting the current data.