

TECHNICAL EXHIBIT  
APPLICATION FOR  
NEW DIGITAL TRANSLATOR STATION  
DTV STATION KCWX-DT (FACILITY ID 24316)  
AUSTIN, TEXAS  
CH 8 0.3 KW (MAX-DA)

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of an application for a new low power digital translator for DTV station KCWX-DT at Austin, Texas. In the FCC's Report and Order, Amendments of Parts 73 and 74 of the Commission's Rules to Establish Rules for Replacement Digital Low Power Television Translator Stations, a new "replacement" digital television translator service was created to permit full-service television stations to continue to provide service to viewers within their coverage areas who have lost service as a result of the digital transition. The FCC is well aware of reception issues experienced by low and high VHF digital stations. It is anticipated that the post transition operation of DTV station KCWX-DT on low VHF channel 5 has left some of its analog viewers without service. Therefore, KCWX-DT is proposing a new low power digital operation in order to provide coverage to a portion of its full service television service, where loss of reception is expected.

Specifically, this application proposes a new digital translator facility on channel 8, to fill in a portion of the KCWX-DT coverage in the Austin area. The proposed facility will operate with a maximum directional effective radiated power (ERP) of 0.3 kilowatts, an antenna radiation center height above mean sea level (RCAMSL) of 401 meters, and employ a Bogner B4VH directional antenna. The antenna will be oriented at 180° true. It is proposed to side mount the directional antenna on an existing 374.6 meter supporting structure. The FCC tower registration number for the existing structure is 1013180.

Figure 1 depicts the FCC predicted 47 dBu (Grade B contour) for the KCWX-DT analog operation, the FCC predicted 28 dBu (noise-limited contour) for the KCWX-DT digital operation, and the FCC predicted 28 dBu contour for the proposed low power digital translator operation. As shown, the proposed facility will fill in a portion of the analog coverage area that may experience reception issues.

Response to Paragraph 13 (Interference)

A study has been conducted to assure that the proposal will not create prohibited interference with other licensed, authorized or pending analog or digital TV, LPTV/translator and Class A TV stations. Using the procedures outlined in the FCC's OET-69 Bulletin, a 1 kilometer cell size resolution, a distance terrain increment of 1 kilometer and 2000 U.S. Census, the proposal complies with the current FCC policy (i.e., less than 0.5% new interference caused to other pertinent assignments). In addition, the proposed facility complies with all the following applicable rule Sections: Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030.

Environmental Considerations

The proposed facilities were evaluated in terms of potential radiofrequency radiation exposure at 2 meters above ground level in accordance with OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation". This Bulletin provides assistance in determining whether FCC-regulated transmitting facilities, operations or devices comply with limits for human exposure to radiofrequency (RF) electromagnetic fields adopted by the Commission in 1996.<sup>1</sup>

The calculated power density at 2 meters above ground level at the base of the tower was calculated using the appropriate equation contained in the Bulletin. Using a "worst-case" vertical relative field value of 1.0, a maximum ERP of 0.3 kilowatts, and an antenna center of radiation height above ground level of 152 meters, the calculated power density at two meters above ground level at the base of the tower is 0.0004 milliwatt per square centimeter (mW/cm<sup>2</sup>), or 0.2 percent of the Commission's recommended limit applicable to general population/uncontrolled exposure areas (0.2 mW/cm<sup>2</sup> for TV channel 8). Therefore, the facility complies with the FCC's RF emission rules.

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<sup>1</sup> See *Report and Order* in ET Docket 93-62, FCC 96-326, adopted August 1, 1996, 11 FCC Rcd 15123 (1997). See also *First Memorandum Opinion and Order*, ET Docket 93-62, FCC 96-487, adopted December 23, 1996, 11 FCC Rcd 17512 (1997), and *Second Memorandum Opinion and Order and Notice of Proposed Rulemaking*, ET Docket 93-62, FCC 97-303, adopted August 25, 1997.

The site is appropriately marked with RFR warning signs. Furthermore, as this is a multi-user site procedures are in place in the event that workers or other authorized personal climb the tower to ensure that appropriate measure will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been addressed by the tower owner as part of the tower registration process.

If there are questions concerning the technical portion of this application, please contact the office of the undersigned.

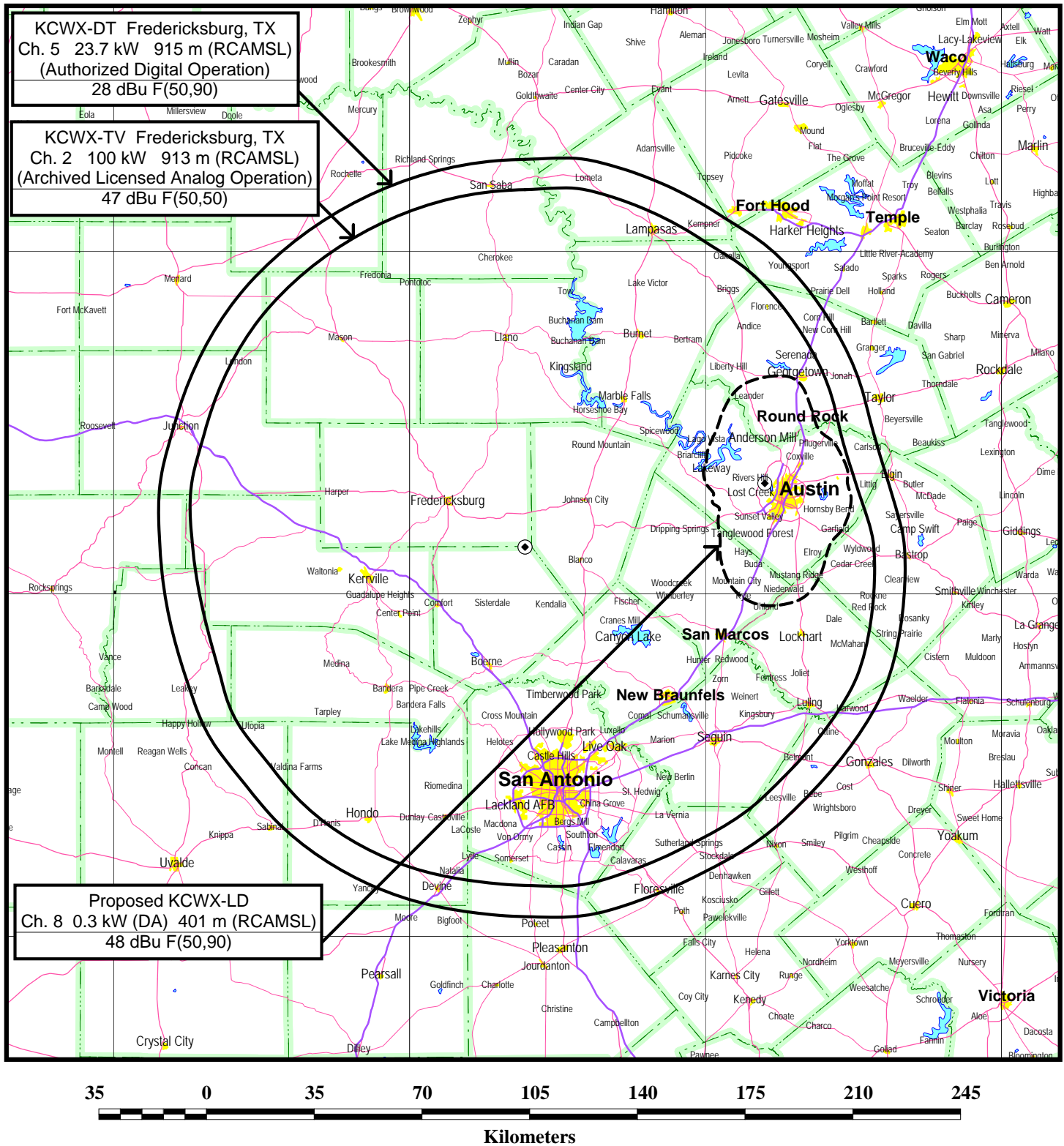


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Figure 1



## FCC PREDICTED COVERAGE CONTOURS

FILL-IN DTV TRANSLATOR  
AUSTIN, TEXAS

CH 8 0.3 KW (DA) 401 M (RCAMSL)

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