

## **KTLM Application for Minor Modification of KTLM DRT BLCDT-20120110AEC**

### Overview

The purpose of this application is to modify authorization for KTLM Digital Replacement Translator on channel 22 (file BLCDT-20120110AEC). The requested facilities closely match those previously authorized under construction permit BMPCDT-20110810AAD. The differences are slightly lower effective radiated power (14.92 kW versus 15.0 kW), slightly lower antenna height (129.54 meters AGL versus 137 meters AGL), and replacement of the Superior Broadcast Products UPML-6 panel antenna with a Jampro JUHD-6/1(6) panel antenna with the precisely the same orientation and azimuth pattern. These differences result in no extension of coverage in any direction beyond that previously authorized in BMPCDT-20110810AAD.

### Environmental Effect

Other than the slight reduction in ERP and antenna height, the requested site considerations have not changed since the grant of construction permit BMPCDT-20110810AAD. This application specifies the same existing communications tower. No new tower construction is required for this facility.

An RF exposure study conducted using the procedures outlined in FCC OET Bulletin 69 and the antenna manufacturer's azimuth and elevation pattern data shows the exposure level drops below the  $1.74 \text{ mw/cm}^2$  maximum permissible occupational/controlled environment exposure level at distances greater than 17.2 meters in the main beam of the antenna. Exposure is below the  $0.347 \text{ mw/cm}^2$  maximum permissible exposure level for public/uncontrolled environments at distances greater than 38.4 meters from the antenna in the main beam. There are no other towers or buildings in the main beam within this distance. The maximum power calculated power level 5 meters above ground is  $0.000129 \text{ mw/cm}^2$  and occurs 28.8 meters from base of the tower. This level is only 0.04% of the public/uncontrolled maximum permissible exposure level.

KTLM agrees to reduce power or shutdown this digital replacement translator, as necessary, to protect workers on the tower from exposure to RF radiation above the maximum permitted exposure levels for a controlled environment.

December 21, 2016

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### Broadcast Facility: Mexican Coordination

As noted, this facility does not exceed the ERP, height or coverage previously authorized under BMPCDT-20110810AAD. A copy of the engineering exhibit submitted in the application for that permit is attached to this application.

That exhibit states "The proposed site is 13 kilometers from the U.S./Mexican border. However, Mexico has already approved KTLM's authorized digital translator operation on channel 22. Furthermore, as indicated in Figure 1, the proposed 51 dBμ contour will not extend beyond the Mexico approved 51 dBμ contour. Therefore, it is not believed necessary to coordinate the instant proposal with Mexico." For the reasons stated in the original engineering exhibit and because the FCC has previously authorized the facilities specified in BMPCDT-20110810AAD, coordination of this operation with Mexico is not believed to be required.

### Broadcast Facility: Compliance with applicable rule sections

The attached engineering exhibit from the previously granted BMPCDT-20110810AAD application demonstrates the requested modifications will continue to comply with Digital Replacement Translator requirements

The interference study for BMPCDT-20110810AAD found "the proposal will not create prohibited interference with other licensed, authorized, or pending DTV, Class A, digital Class A, LPTV displacement applications or any licensed or authorized LPTV or translator stations." To verify this had not changed, a TVStudy 2.02 Interference check was run using default parameters with 1 km cell size and LMS data from December 1, 2016. Only one station showed an increase in interference from the proposed facility, KCWT-CD and the increase was only 0.14%, well below the de-minimis level. The requested facility complies with FCC rules Sections 74.793(e), 74.793(f), 74.793(g) and 74.793(h) and will use currently authorized channel 22, which is not subject to Section 74.709.

Doug Lung  
December 21, 2016

TECHNICAL EXHIBIT  
MODIFICATION OF CONSTRUCTION PERMIT  
FOR NEW DIGITAL REPLACEMENT TRANSLATOR  
FCC FILE NO. BDRTCDT-20100427ABC  
FOR STATION KTLM(DT)  
HARLINGEN, TEXAS  
CH 22 15 KW (MAX-DA)

Technical Narrative

This Technical Exhibit supports an application for modification of the construction permit of a new digital replacement translator for digital television (DTV) station KTLM at Rio Grande City, Texas, FCC File No. BDRTCDT-20100427ABC. Full-service station KTLM is licensed to operate on digital channel 40, with a non-directional antenna effective radiated power (ERP) of 355 kilowatts (kW) and an antenna radiation center height above average terrain (HAAT) of 577 meters.<sup>1</sup>

The application is the licensee of a full-service television station that experienced a loss of service affecting former analog viewers located east of Rio Grande City after it transitioned to its final, post-transition DTV facility. As previously noted, KTLM has received numerous complaints from viewers in the area to be covered by the proposed translator of difficulties with reception of the station's post-transition digital signal. The applicant proposes to modify its authorized replacement digital translator facility to help alleviate these digital reception issues.

Proposed Facilities

This application proposes digital operation on channel 22 with a directional antenna maximum ERP of 15 kW and an antenna radiation center height above mean sea level (RCAMSL) of 150 meters. The proposed coordinates are (NAD27):

26° 06' 19" North Latitude  
97° 41' 28" West Longitude

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<sup>1</sup> See BLCDT-20090617AAK.

The site is 104 kilometers east-southeast of the main DTV site. The antenna structure registration number is 1050199.

Contour Extension Compliance/Minor Change Application

Figure 1 is a map showing the licensed KTLM(DT) 41 dBu (digital) coverage contour as well as the authorized and proposed digital translator 51 dBu contours. The 51 dBu contour of the requested facility would not extend beyond the service area (64 dBu) of the applicant's former analog facility, would fall entirely within the service area of the station's currently licensed 355 kW DTV facility and would also not extend beyond the 51 dBu contour of the currently authorized digital translator. The applicant accordingly is eligible to receive a permit to construct the requested facility.

This instant application is considered a minor change as the authorized and proposed 51 dBu contours overlap and the proposed site relocation is less than 30 miles.

Allocation Considerations

A study has been conducted to assure that the proposal will not create prohibited interference with other licensed, authorized or pending DTV, Class A, digital Class A, LPTV displacement applications or any licensed or authorized LPTV or translator stations. Using the procedures outlined in the FCC's OET-69 Bulletin, a standard 1 kilometer grid and 1 kilometer terrain distance increment, 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).

The applicant recognizes the proposal is secondary to other authorized full-service analog and DTV operations. The applicant understands that it must correct and/or eliminate prohibited interference that may result from its proposed operation.

### Mexican Coordination

The proposed site is 13 kilometers from the U.S./Mexican border. However, Mexico has already approved KTLM's authorized digital translator operation on channel 22. Furthermore, as indicated on Figure 1, the proposed 51 dBu contour will not extend beyond the Mexico approved 51 dBu contour. Therefore, it is not believed necessary to coordinate the instant proposal with Mexico.

### Radiofrequency Electromagnetic Field Exposure

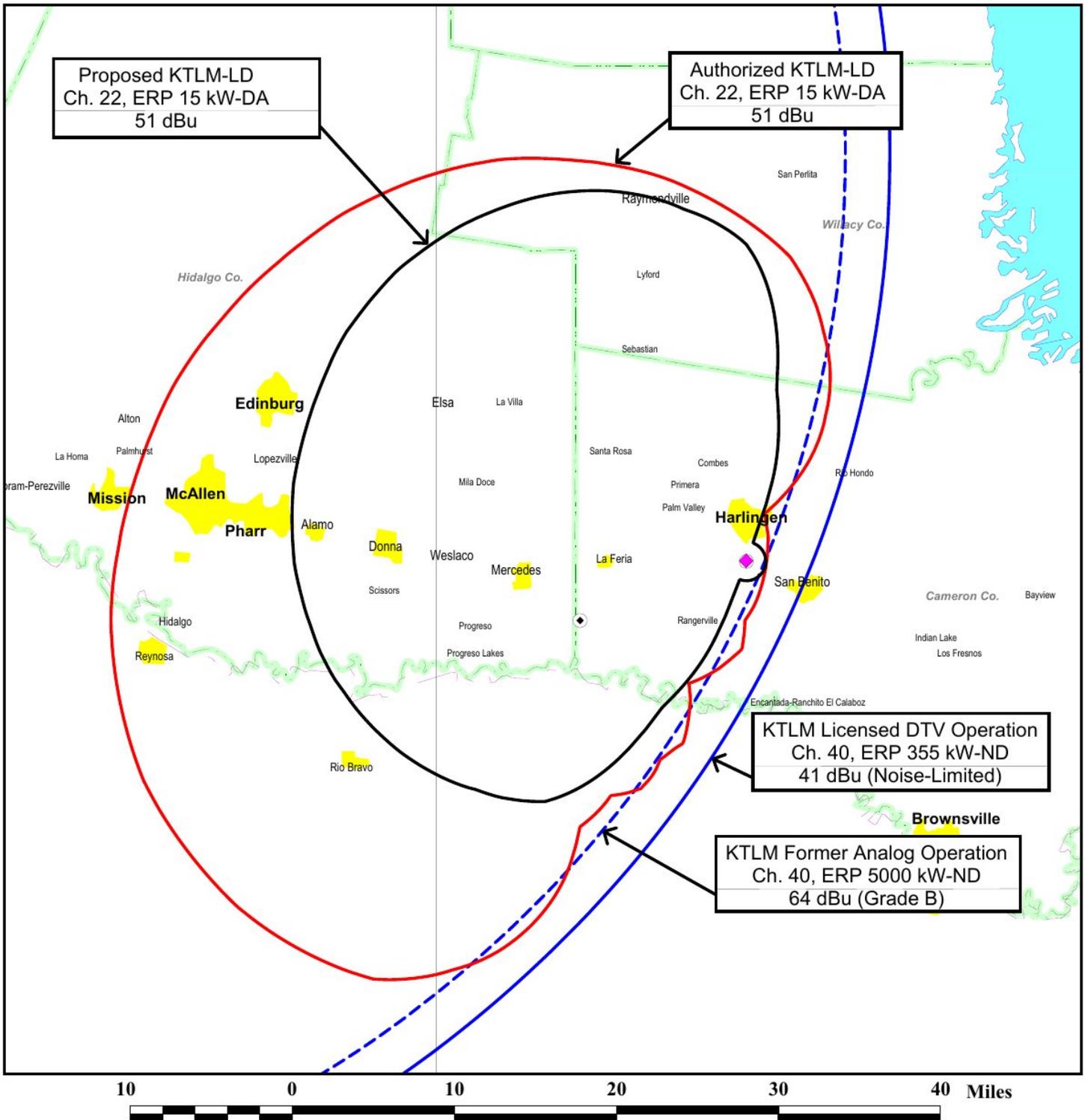
The proposed digital facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the antenna is located 137 meters above ground level. The proposed maximum ERP is 15 kW. Based on a conservative downward relative field of 0.5, the calculated power density at a point 2 meters (6.6 feet) above ground level will not exceed 2% of the FCC's recommended limit of 0.35 mW/cm<sup>2</sup> for channel 22 for an "uncontrolled" environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. As this is a multi-user site and agreement will control site access. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures 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 provided to the FCC by the tower owner.

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August 9, 2011



### FCC PREDICTED COVERAGE CONTOURS

FILL-IN TRANSLATOR STATION KTLM-LD  
HARLINGEN, TEXAS  
CH 22 15 KW (MAX-DA)