

TECHNICAL EXHIBIT  
DIGITAL DISPLACEMENT RELIEF APPLICATION FOR  
MODIFICATION OF CONSTRUCTION PERMIT  
FCC FILE NO. BDFCDTL-20061122AEA  
LOW POWER TV STATION KZKC-LP  
FACILITY ID 65763  
BAKERSFIELD, CALIFORNIA  
CH 23 15 KW (MAX-DA)

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of a digital displacement relief application for Low Power TV (LPTV) station KZKC-LP at Bakersfield, California (Facility ID: 65763). Specifically, this application proposes to modify the KZKC-LP flash-cut digital operation (BDFCDTL-20061122AEA) to change transmitter site and specify digital operation on UHF channel 23.

Displacement Relief Eligibility

Station KZKC-LP is currently licensed (BLTTTL-20050428AAC) to operate on NTSC channel 42 (638-644 MHz) with a directional antenna maximum ERP of 150 kW and an antenna RCAMSL of 1-47 meters. The KZKC-LP transmitter site is located only 149.4 km from the licensed operation of KWHY-DT on co-channel 42 at Los Angeles, California. Therefore KZKC-LP is considered to be displaced pursuant to Section 73.3572(a)(4)(iii) and permitted to file a displacement relief application.

It is also proposed to operate KZKC-LP on digital channel 23 (524-530 MHz) from a new transmitter site located 13.5 kilometers east of the current KZKC-LP site. It is noted that the proposed site is located less than 48 kilometers (30 miles) from KZKC-LP's currently licensed site. In addition, there will be overlap of the current 74 dBu and proposed 51 dBu contours as detailed below. Therefore, based on current FCC policy, a displacement relief application specifying a site change of less than 48 kilometers (30 miles) and also involving protected contour overlap is considered permissible.

This application is considered a "minor change" in facilities pursuant to Section 73.3572, as it is a displacement

relief application and the proposed 51 dBu contour will overlap a portion of the licensed 74 dBu contour (see Figure 1).

Proposed Antenna System/Antenna Structure Registration

A Bogner B16UAM directional antenna (Antenna ID 59347) will be employed with a main lobe orientation of 256 degrees true, a maximum ERP of 15 kW and an RCAMSL of 2296 meters. The Bogner B16UAM directional antenna will be mounted at the 14 meter level on an existing 19.3 meter tower. Based on the TOWAIR determination (see Figure 2), the existing tower does not need to be registered.

Response to Paragraph 13

A study has been conducted using the OET Bulletin 69 interference model.<sup>1</sup> The results indicate that the proposed operation will not create prohibited interference to stations in the Land Mobile Radio Service (LMRS) or other existing, authorized or proposed NTSC or DTV full-power, LPTV, TV translator or Class A stations with the exception of commonly owned station KERO-TV. However, the interference caused to KERO-TV has been ignored as the licensee consents to the received interference.

Response to Paragraph 14 - Environmental Protection Act

The proposed KZKC-LP digital facilities were evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with OET Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation." The calculated power density at 2 meters above ground level at the base of the tower was calculated using the appropriate equation of the Bulletin. Figure 3 depicts the vertical pattern data for the proposed directional antenna. Using a worst-case vertical relative field value of 0.07 at depression angles towards the tower base (-60° to -90° elevation), a maximum ERP of 15 kilowatts, the

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<sup>1</sup>The du Treil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. Nominal grid cell size resolution of 1 km and terrain increment of 1 km were employed.

calculated power density at 2 meters above ground level at the base of the tower is 0.017 milliwatts per square centimeter ( $\text{mW}/\text{cm}^2$ ), or 4.84% percent of the Commission's recommended limit of  $0.351 \text{ mW}/\text{cm}^2$  for TV channel 23 applicable to general population/uncontrolled exposure areas. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

Access to the transmitting site will be restricted and appropriately marked with warning signs. Furthermore, procedures are in place 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.

Finally, it is noted that this technical exhibit only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already has been provided to the FCC by the tower owner as part of the tower registration process.

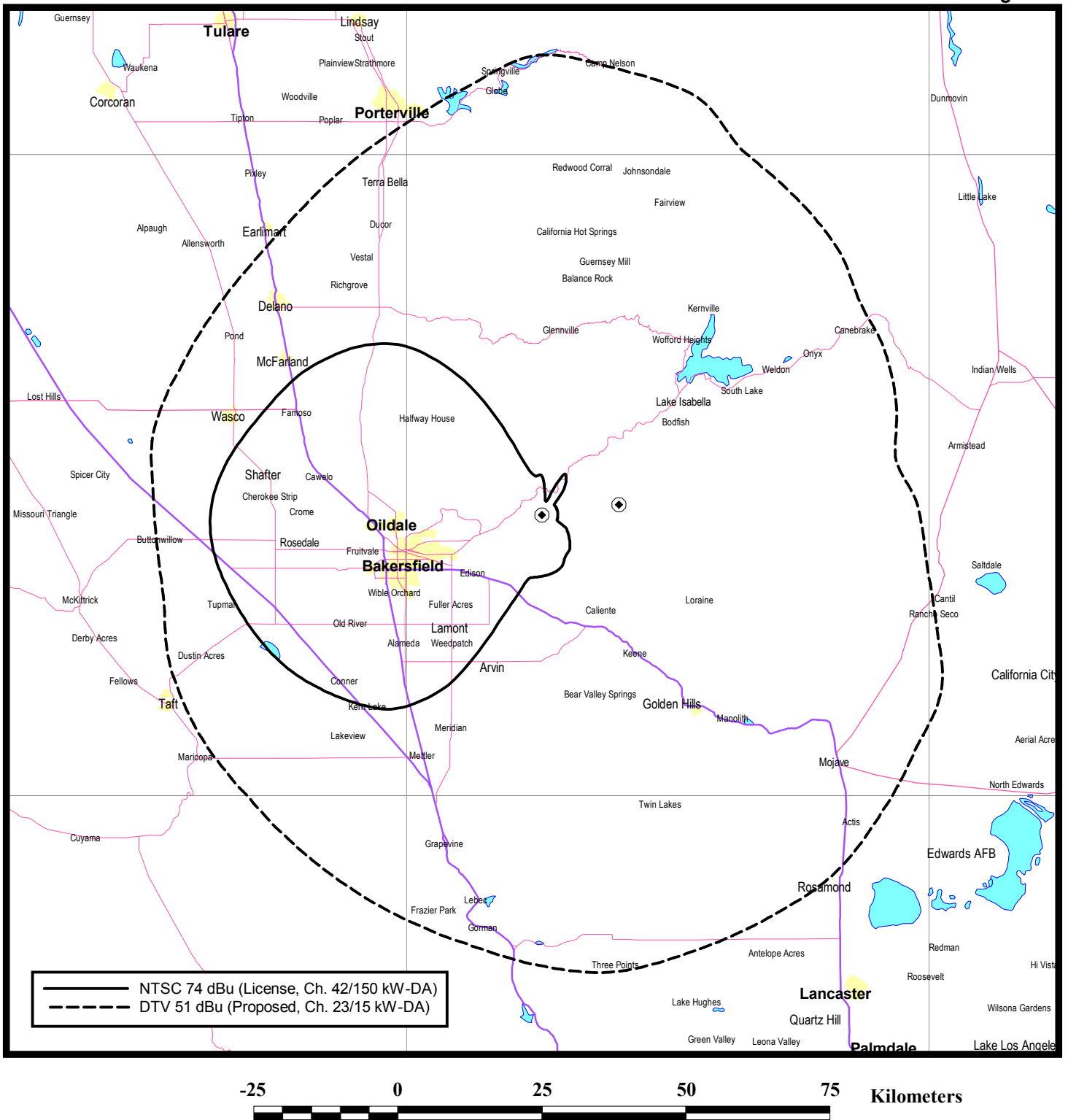


W. Jeffrey Reynolds

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 34237  
(941) 329-6000  
JEFF@DLR.COM

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Figure 1



**PREDICTED CONTOURS**

**STATION KZKC-LP**  
**BAKERSFIELD, CALIFORNIA**  
**DIGITAL CH 39 15 KW (MAX-DA)**

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

## TOWAIR Determination Results

### \*\*\* NOTICE \*\*\*

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

#### DETERMINATION Results

**Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.**

#### Your Specifications

##### NAD83 Coordinates

Latitude	35-27-13.8 north
Longitude	118-35-40.3 west

##### Measurements (Meters)

Overall Structure Height (AGL)	19.3
Support Structure Height (AGL)	19.3
Site Elevation (AMSL)	2282

##### Structure Type

TOWER - Free standing or Guyed Structure used for Communications Purposes

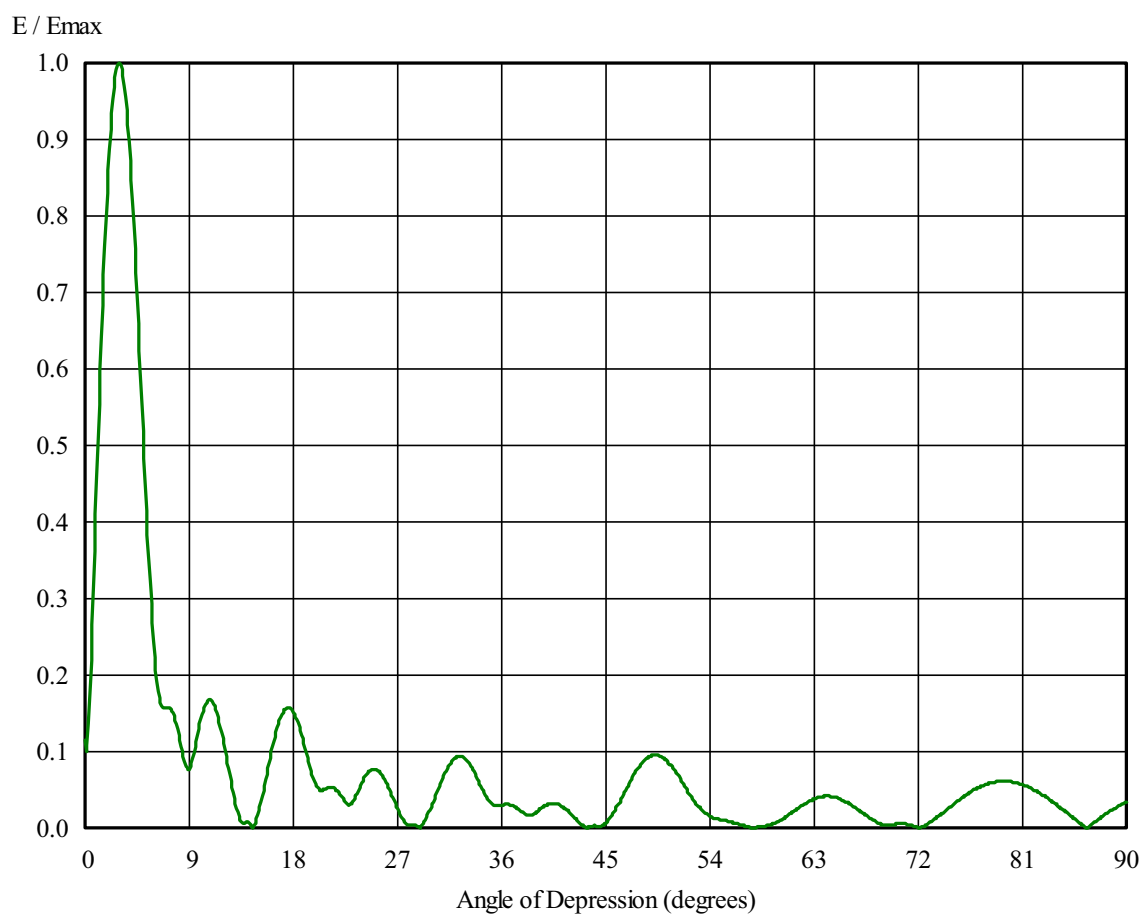
#### [Tower Construction Notifications](#)

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

CLOSE WINDOW



## UHF Vertical Radiation Pattern Bogner Job 931, Ch 23



Antenna Type: UHF Bogner Job 931  
 Antenna P/n: B16UAM  
 Pattern Gain: 12.8 dBd  
 Beamtilt: 3.0°  
 Null Fill: Std.

Rev. 001  
 Date: 5/12/03