

TECHNICAL EXHIBIT  
DIGITAL FLASH-CUT APPLICATION FOR  
TV TRANSLATOR STATION K25HJ (FACILITY ID 48568)  
HORNSBY RANCH, ETC., NEW MEXICO  
CH 25 0.21 KW

Technical Narrative

This Technical Exhibit supports a flash-cut application for TV translator station K25HJ. Station K25HJ is licensed to operate on analog channel 25 with a non-directional antenna (visual) effective radiated power (ERP) of 1.028 kW and an antenna height above mean sea level (RCAMSL) of 1748 meters (BLTT-20031107AEV).

Proposed Facilities

This application proposes digital operation on the current channel (25), with the same antenna and at the same transmitter site location. The transmitter site coordinates remain (NAD27): 34-59-07 N, 104-08-00 W. An Andrew, model AL8 antenna, with a non-directional ERP of 0.21 kW and antenna RCAMSL of 1748 meters is proposed.

The existing 50.3 meter structure (165 feet) does not require registration as the FCC's TOWAIR program indicates there are no airports within 8 kilometers (5 miles).

Figure 1 is a map showing the licensed 74 dBu (analog) and proposed 51 dBu (digital) coverage contours. As can be seen on the map, there is common area where both contours overlap.

### Allocation Considerations

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 2 kilometer cell size resolution and 1990 U.S. Census, the proposal complies with the current FCC policy (i.e., less than 0.5% new interference caused to other pertinent assignments). If necessary, a waiver of the FCC rules is respectfully requested based on use of the procedures outlined in the FCC's OET-69 Bulletin to the remaining LPTV/translator stations.

The applicant recognizes the proposal is secondary to 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.

### Radiofrequency Electromagnetic Field Exposure

The proposed K25HJ 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 48.5 meters above ground level. The proposed ERP is 0.21 kW. Based on various downward angles and the Andrew AL8 vertical pattern (Figure 2), the calculated power density at a point 2 meters (6.6 feet) above ground level will not exceed 1% of the FCC's recommended limit of  $0.36 \text{ mW/cm}^2$  for channel 25 for an "uncontrolled" environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. 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.

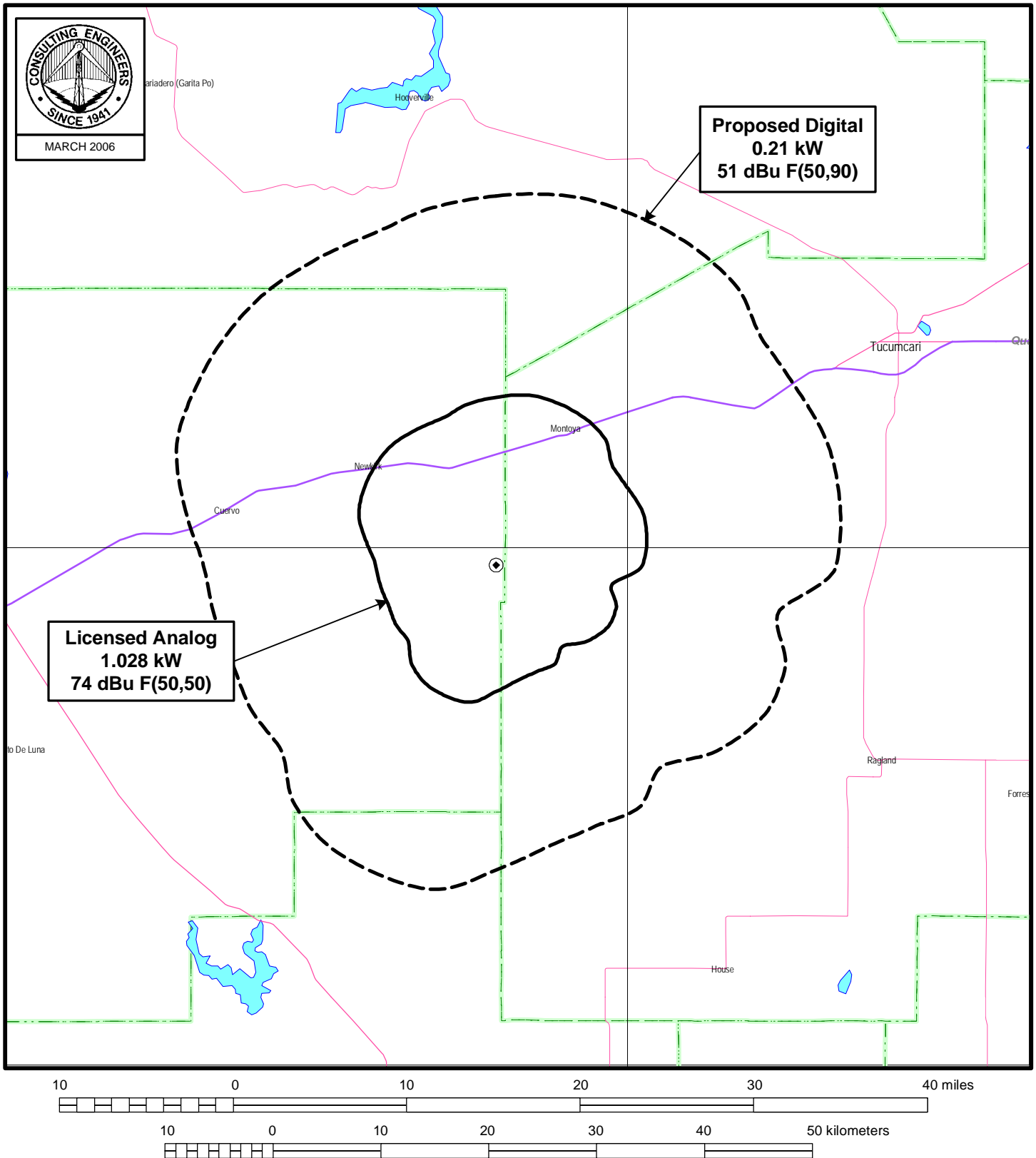


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Figure 1



## **PREDICTED COVERAGE CONTOURS**

STATION K25HJ

HORNSBY RANCH, ETC., NEW MEXICO

du Treil, Lundin & Rackley, Inc Sarasota, Florida

**ELEVATION PATTERN**

Type:

AL8

Channel:

Directivity:

Numeric

dBd

Location:

Main Lobe:

8.68

9.39

Beam Tilt:

-1.75

Horizontal:

7.30

8.63

Polarization:

Horizontal

