

TECHNICAL EXHIBIT
DIGITAL FLASH-CUT APPLICATION FOR
TV TRANSLATOR STATION K48GK (FACILITY ID 11465)
GALLUP, NEW MEXICO
CH 48 0.236 KW

Technical Narrative

This Technical Exhibit supports a flash-cut application for TV translator station K48GK. Station K48GK is licensed (BLTT-20020320ADI) to operate on analog channel 48 with a non-directional maximum (visual) effective radiated power (ERP) of 1.18 kW and an antenna height above mean sea level (RCAMSL) of 2071 meters.

Proposed Facilities

This application proposes digital operation on the current channel (48), at the current transmitter site and with the same antenna. The transmitter site coordinates remain (NAD27): 35-32-08 N, 108-44-28 W. An Andrew AL-8 non-directional antenna, with a maximum ERP of 0.236 kW and antenna RCAMSL of 2071 meters is proposed.

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 K48GK 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 provide 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 1996.¹

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. As shown on Figure 2 (antenna vertical relative pattern), the maximum vertical relative field for depression angles towards the tower base (-60° to -90°) is less than 0.1. Therefore, using a vertical relative field value of 0.1, a maximum ERP of 0.236 kilowatts, and an antenna center of radiation height above ground level of 40 meters, the calculated power density at two meters above ground level at the base of the tower is 0.0001 milliwatt per square centimeter (mW/cm^2), or 0.02 percent of the Commission's recommended limit applicable to general

¹ 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.

population/uncontrolled exposure areas (0.45 mW/cm^2 for TV channel 48). Therefore, the facility complies with the FCC's RF emission rules.

Access to the transmitting site will be restricted and appropriately marked with warning signs. Furthermore, as this is a multi-user site, an agreement will be in effect to control access to the site. In the event that workers or other authorized personnel enter the restricted area appropriate measures shall be taken to limit RF energy exposure. Such measures include limiting the exposure time, wearing protective clothing, reducing power to an acceptable level or termination of transmitter output power all together until workers leave the restricted area.

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

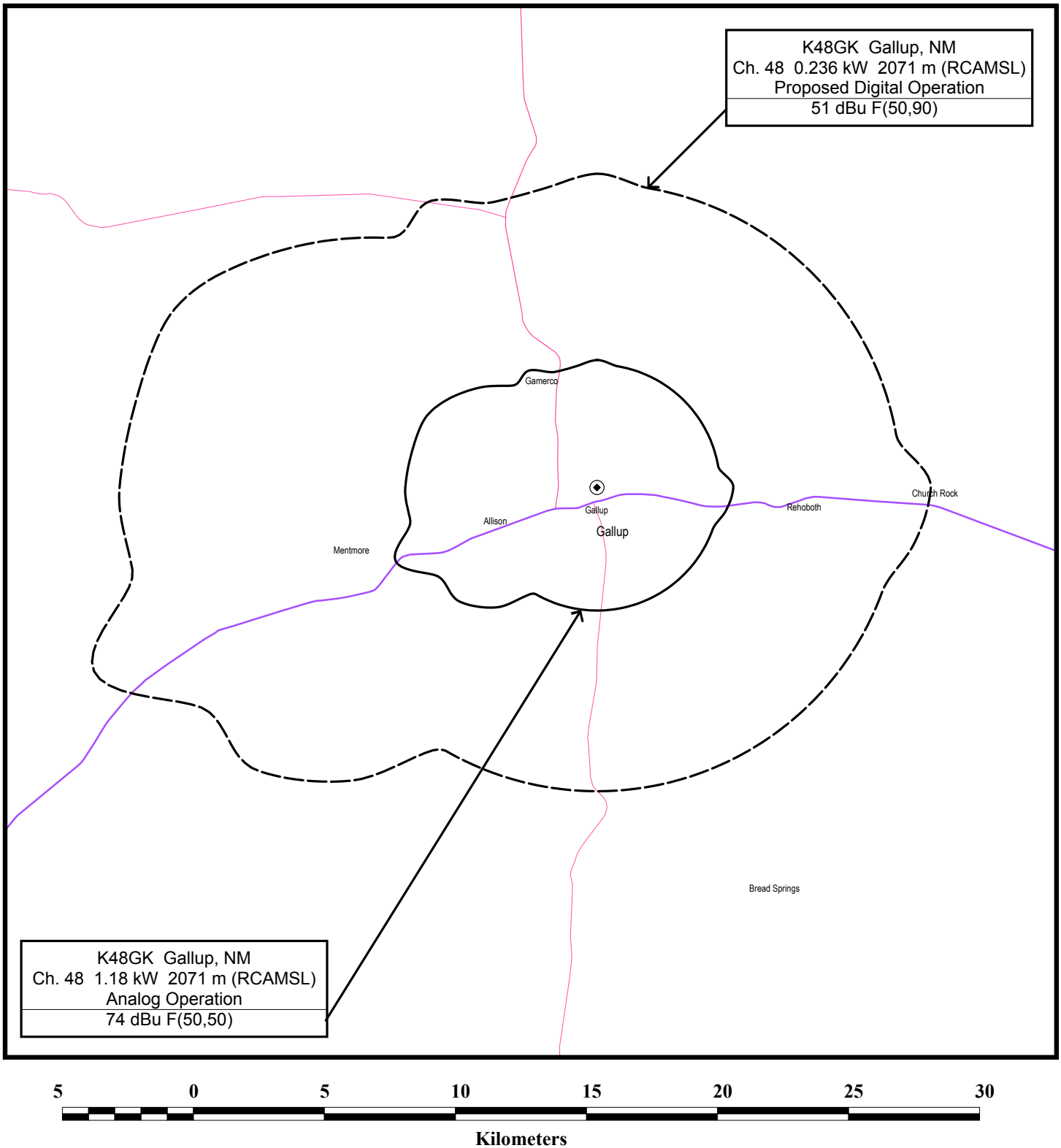
A handwritten signature in black ink, appearing to read 'J. Howell', is centered on the page.

Thomas Howell

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

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Figure 1



FCC PREDICTED COVERAGE CONTOURS

TV TRANSLATOR STATION K48GK
GALLUP, NEW MEXICO
CH 48 0.236 KW (DA) 2071 M (RCAMSL)

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

