

TECHNICAL EXHIBIT  
DIGITAL FLASH-CUT APPLICATION FOR  
TV TRANSLATOR STATION K31FV (FACILITY ID 48593)  
DURANGO AND HERMOSA, COLORADO  
CH 31 0.399 KW (MAX-DA)

Technical Narrative

This Technical Exhibit supports a flash-cut application for TV translator station K31FV. Station K31FV is licensed (BLTT-20031205ABL) to operate on analog channel 31 with a directional antenna maximum (visual) effective radiated power (ERP) of 1.993 kW and an antenna height above mean sea level (RCAMSL) of 2762 meters.

Proposed Facilities

This application proposes digital operation on the current channel (31), at the current transmitter site and with the same antenna. The transmitter site coordinates remain (NAD27): 37-20-18 N, 107-49-21 W. A Scala PR-450 composite antenna, with a maximum ERP of 0.399 kW and an antenna RCAMSL of 2762 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 K31FV 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.<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. As shown on Figure 1 (antenna vertical relative pattern), the maximum vertical relative field for depression angles towards the tower base ( $-60^{\circ}$  to  $-90^{\circ}$ ) is less than 0.1. Therefore, using a vertical relative field value of 0.1, a directional maximum ERP of 0.399 kilowatts, and an antenna center of radiation height above ground level of 15 meters, the calculated power density at two meters above ground level at the base of the tower is 0.0008 milliwatt per square centimeter ( $\text{mW}/\text{cm}^2$ ), or 0.2 percent of the Commission's recommended limit applicable to

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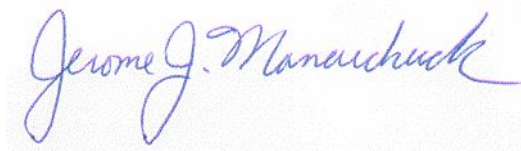
<sup>1</sup> See *Report and Order* in ET Docket 93-62, FCC 96-326, adopted August 1, 1996, 11 FCC Rcd 15123 (1997). See also *First Memorandum Opinion and Order*, ET Docket 93-62, FCC 96-487, adopted December 23, 1996, 11 FCC Rcd 17512 (1997), and *Second Memorandum Opinion and Order and Notice of Proposed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

general population/uncontrolled exposure areas ( $0.38 \text{ mW/cm}^2$  for TV channel 31).

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.

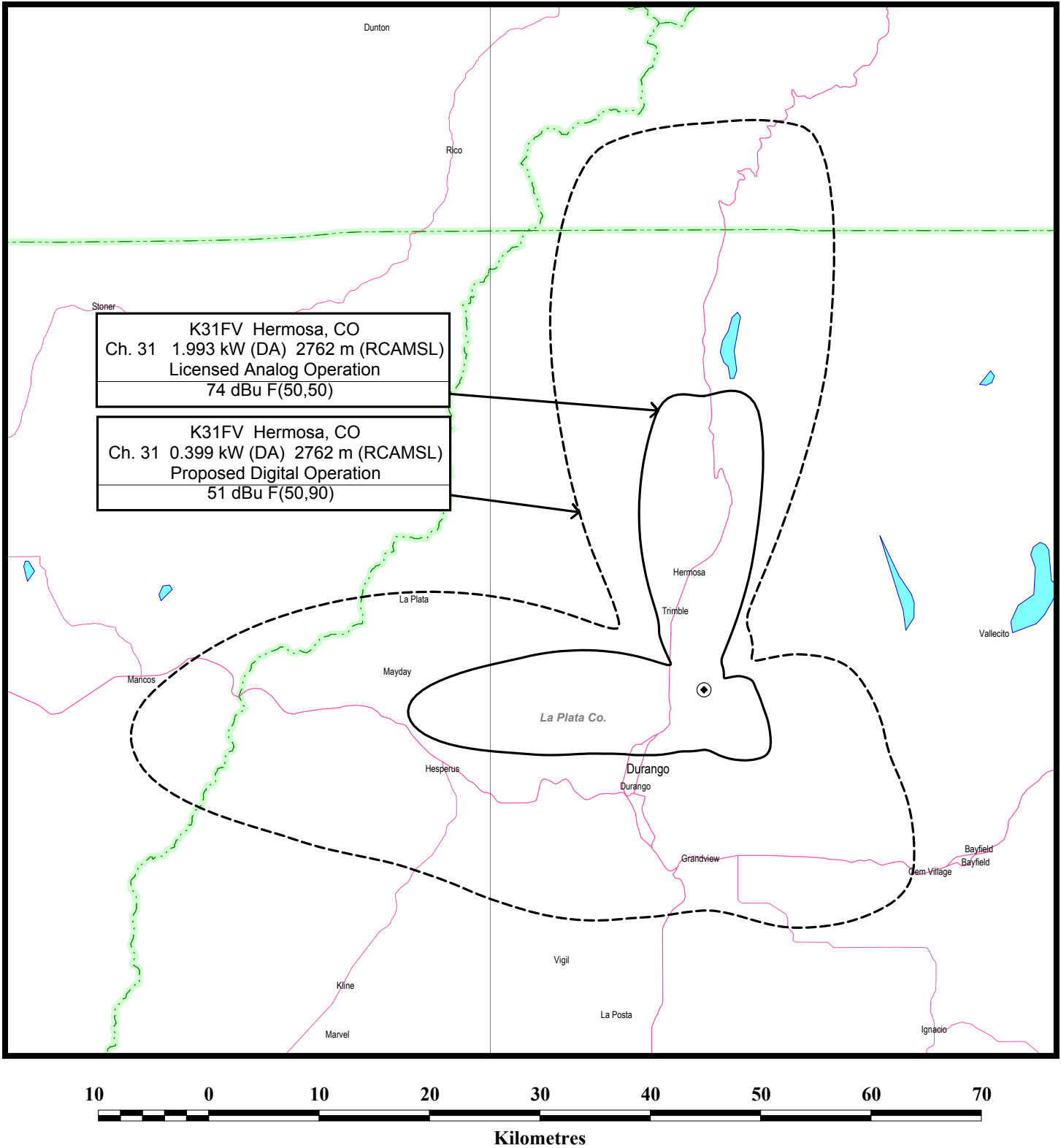


Jerome J. Manarchuck

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March 22, 2006

Figure 1

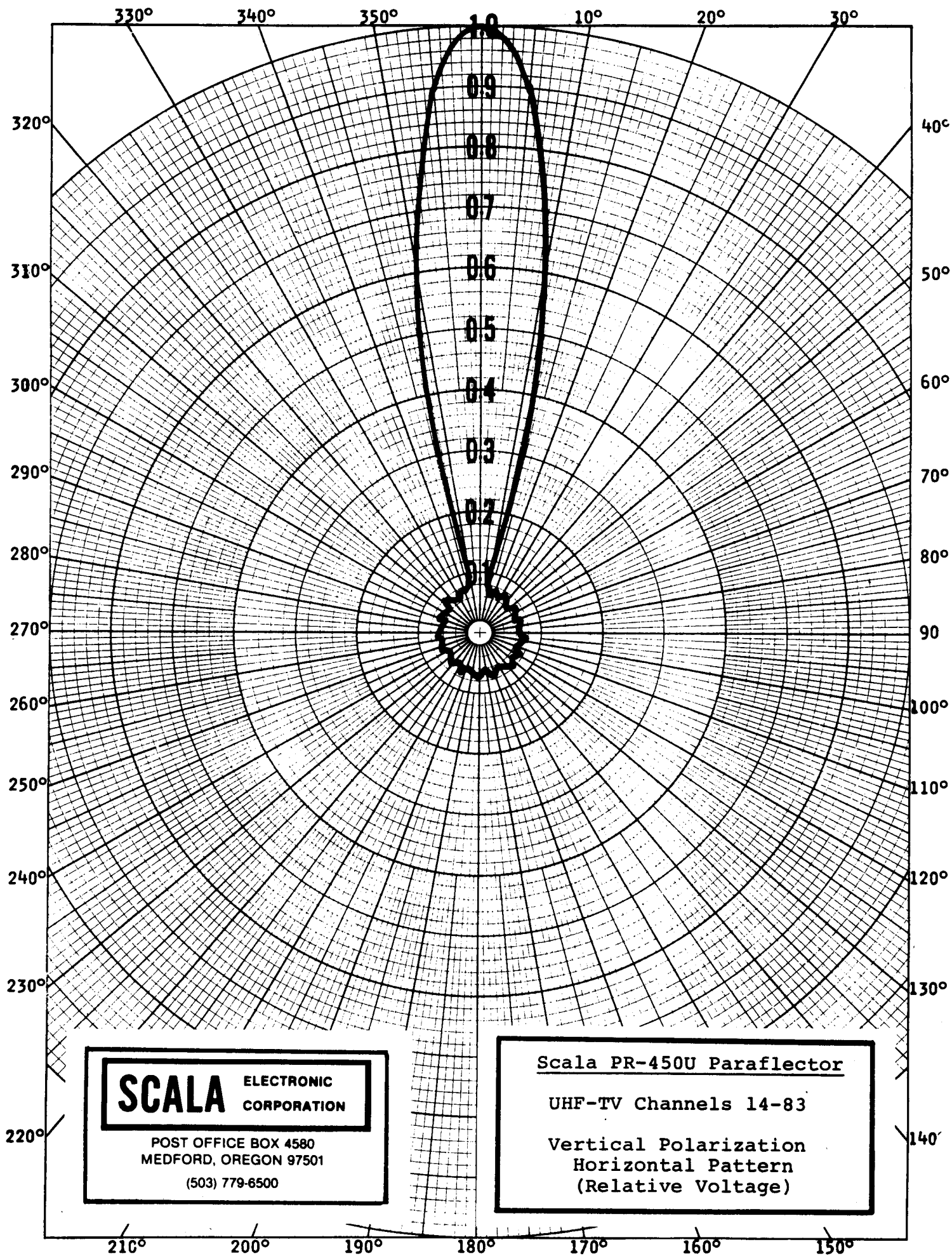


# FCC PREDICTED COVERAGE CONTOURS

TV TRANSLATOR STATION K31FV  
DURANDO & HERMOSA, COLORADO  
CH 31 0.399 KW (DA) 2762 M (RCAMSL)

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

Figure 2



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## Antenna Structure Registration

[FCC](#) > [WTB](#) > [ASR](#) > [Online Systems](#) > TOWAIR[FCC Site Map](#)

### TOWAIR Determination Results

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#### \*\*\* 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  | 37-20-18.0 north |
| Longitude | 107-49-23.0 west |

##### Measurements (Meters)

|                                |      |
|--------------------------------|------|
| Overall Structure Height (AGL) | 15   |
| Support Structure Height (AGL) | 14   |
| Site Elevation (AMSL)          | 2747 |

##### Structure Type

TOWER - Free standing or Guyed Structure used for Communications Purposes

#### Tower Construction Notification

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

Note: Notification does NOT replace [Section 106 Consultation](#).

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