

TECHNICAL EXHIBIT  
DIGITAL FLASH-CUT APPLICATION FOR  
TV TRANSLATOR STATION K39FY (FACILITY ID 125596)  
ZUNI, NEW MEXICO  
CH 39 0.17 KW (MAX-DA)

Technical Narrative

This Technical Exhibit supports a flash-cut application for TV translator station K39FY. Station K39FY is licensed to operate on analog channel 39 with a directional antenna maximum (visual) effective radiated power (ERP) of 0.829 kW and an antenna height above mean sea level (RCAMSL) of 2169 meters (BLTT-20020320ADH).

Proposed Facilities

This application proposes digital operation on the current channel (39), at the current transmitter site and with the same antenna. The transmitter site coordinates remain (NAD27): 35-06-50 N, 108-44-06 W. A Scala (SCA), model PR- T.V. 39, 50 OHM, oriented at 240 degrees True, with a maximum ERP of 0.17 kW and antenna RCAMSL of 2169 meters is proposed.

The existing 6 meter structure (50 feet) does not require registration as the FCC's TOWAIR program indicates that antenna structures that do not exceed 6.1 meters do not require registration.

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.

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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.

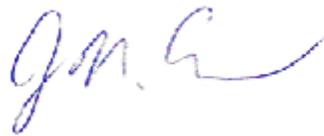
Radiofrequency Electromagnetic Field Exposure

The proposed K39FY 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 4.6 meters above ground level. The proposed maximum ERP is 0.17 kW. Based on various downward angles and the Scala vertical pattern (Figure 2), the calculated power density at a point 2 meters (6.6 feet) above ground level will not exceed 5% of the FCC's recommended limit of 0.42 mW/cm<sup>2</sup> for channel 39 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

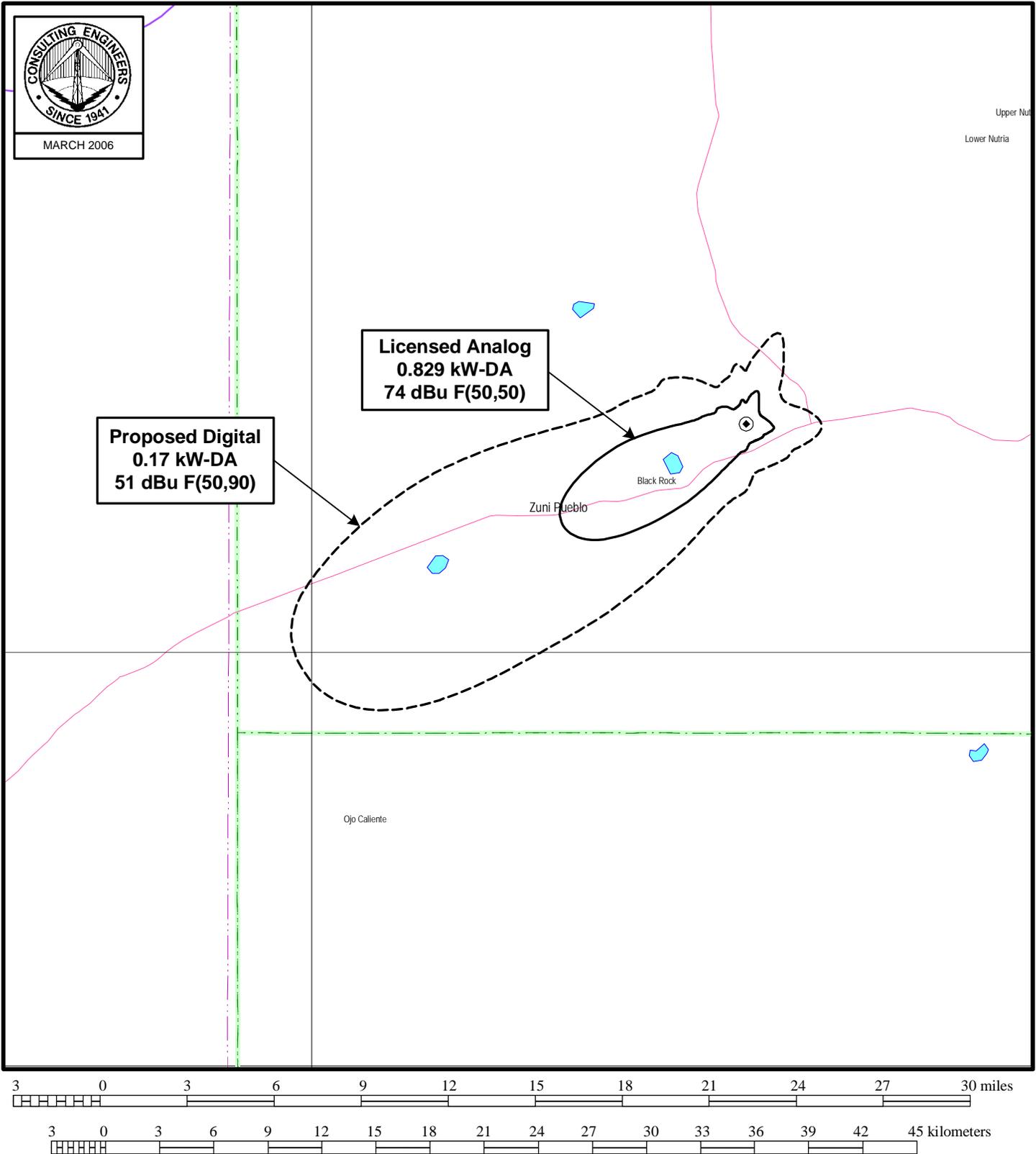
clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure.



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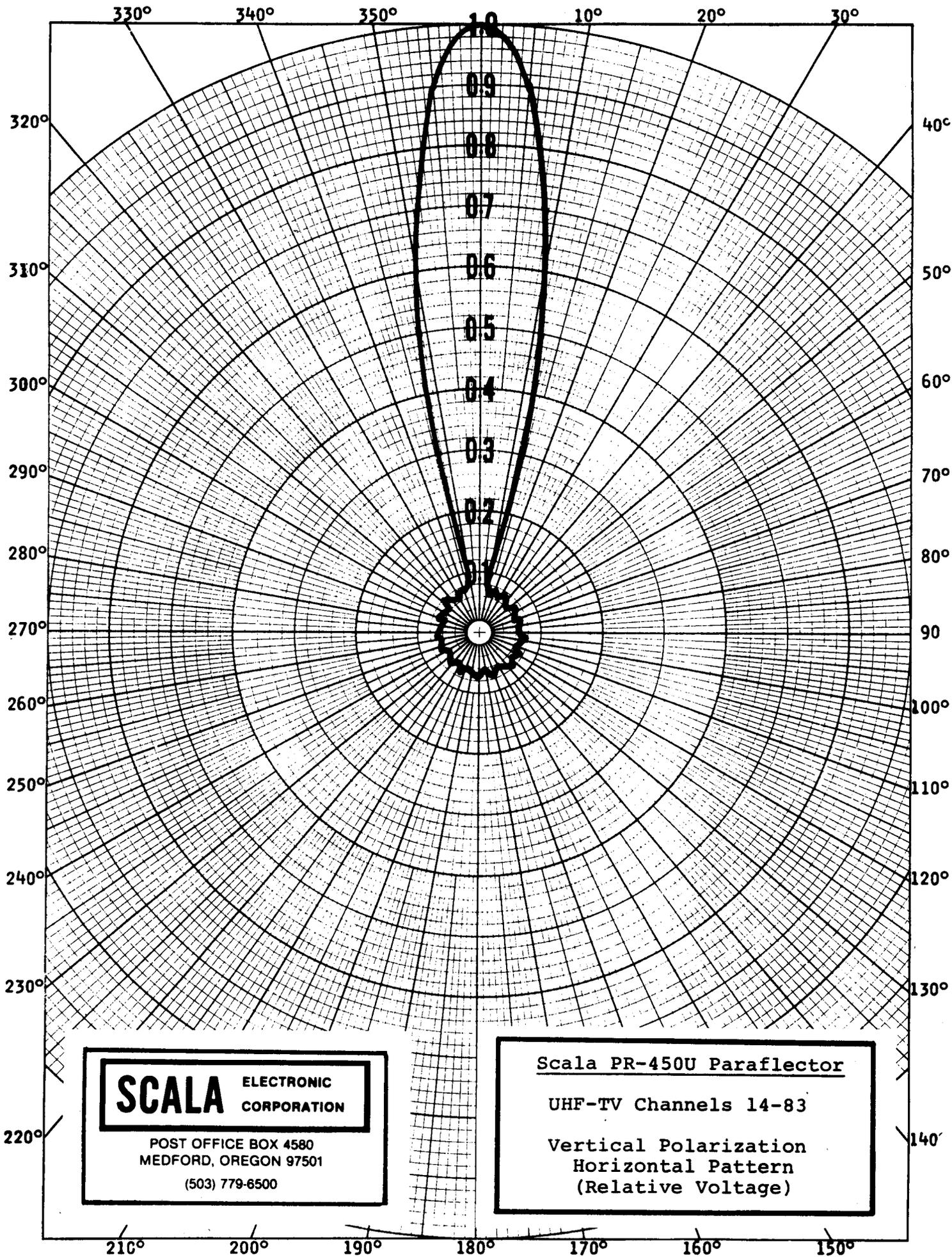
## **PREDICTED COVERAGE CONTOURS**

STATION K39FY

ZUNI, NEW MEXICO

du Treil, Lundin & Rackley, Inc Sarasota, Florida

Figure 2



**SCALA** ELECTRONIC CORPORATION

POST OFFICE BOX 4580  
MEDFORD, OREGON 97501  
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Scala PR-450U Paraflector

UHF-TV Channels 14-83

Vertical Polarization  
Horizontal Pattern  
(Relative Voltage)