

TECHNICAL EXHIBIT
DIGITAL FLASH-CUT APPLICATION FOR
TV TRANSLATOR STATION K47FX (FACILITY ID 34476)
CARLSBAD, NEW MEXICO
CH 47 2.3 KW

Technical Narrative

This Technical Exhibit supports a flash-cut application for TV translator station K47FX. Station K47FX is licensed (BLTT-20050603AAI) to operate on analog channel 47 with a non-directional maximum (visual) effective radiated power (ERP) of 12.1 kW and an antenna height above mean sea level (RCAMSL) of 1061 meters.

Proposed Facilities

This application proposes digital operation on the current channel (47), at the current transmitter site and with the same antenna. The transmitter site coordinates remain (NAD27): 32-28-28 N, 104-11-54 W. An Andrew AL-8 non-directional antenna, with a maximum ERP of 2.3 kW and antenna RCAMSL of 1061 meters is proposed. The FCC Tower Registration Number for the existing 152.4 meter structure (500 foot) is 1230888.

Figure 1 is a map showing the licensed 74 dBu (analog) and proposed 51 dBu (digital) coverage contours. As shown on the map the licensed analog contour is completely encompassed by the proposed digital contour.

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 1 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 K47FX 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 provides 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

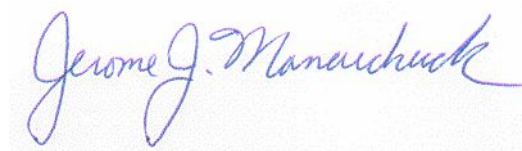
The calculated power density at 2 meters above ground level at the base of the tower was calculated using the appropriate equation contained in the Bulletin. As shown on Figure 2 (antenna vertical relative pattern), the maximum vertical relative field for depression angles towards the tower base (-60° to -90°) is less than 0.2. Therefore, using a vertical relative field value of 0.2, a maximum ERP of 2.3 kilowatts, and an antenna center of radiation height above ground level of 61 meters, the calculated power density at two meters above ground level at the base of the tower is 0.0009 milliwatt per square centimeter (mW/cm^2), or 0.2 percent of the Commission's recommended limit applicable to general population/uncontrolled exposure areas ($0.45 \text{ mW}/\text{cm}^2$ for TV channel 47). Therefore, the facility complies with the FCC's RF emission rules.

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.

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.

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

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

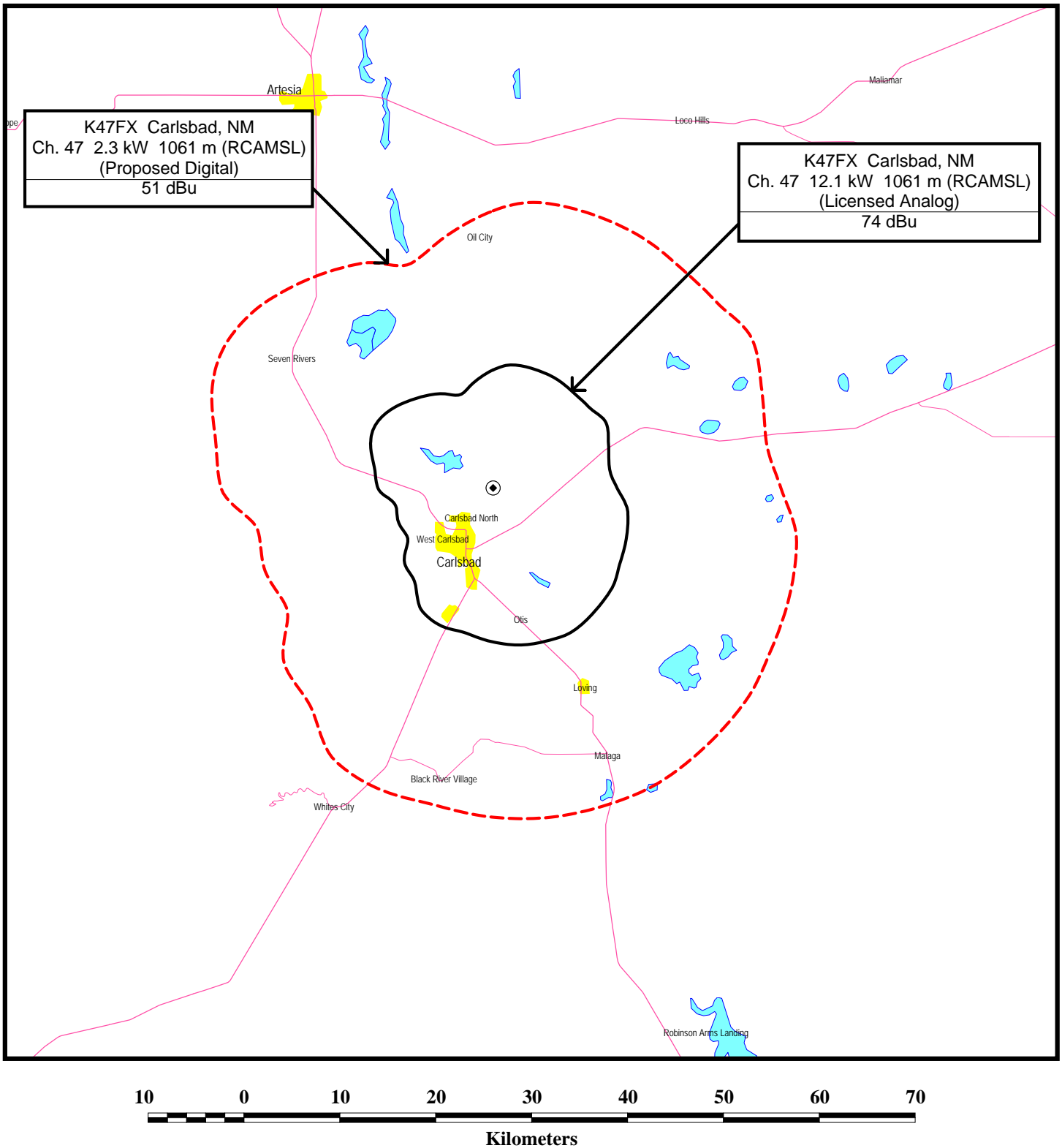


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August 17, 2007

Figure 1



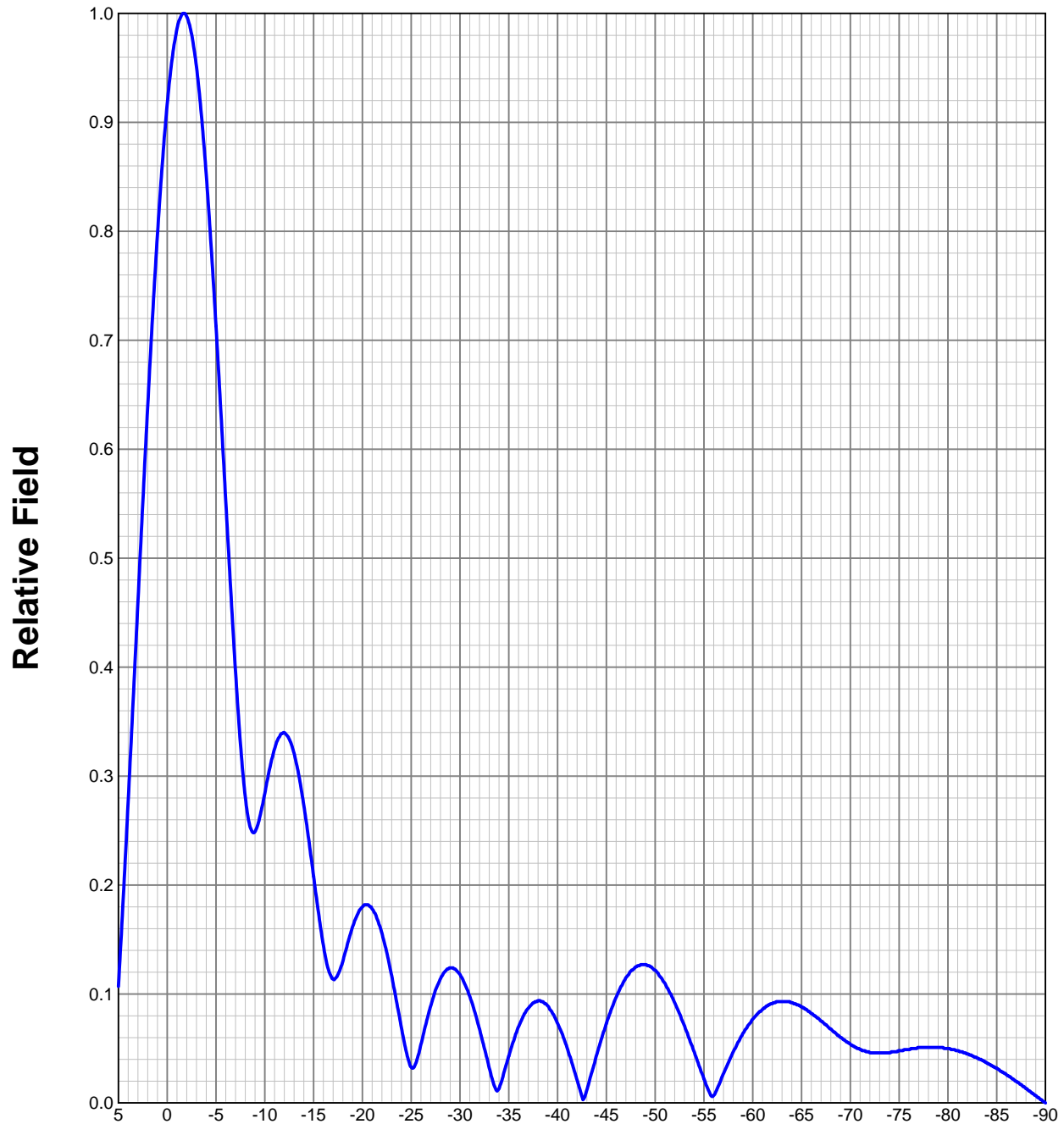
COVERAGE COMPARISON

TV TRANSLATOR STATION K47FX
CARLSBAD, NEW MEXICO

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

ELEVATION PATTERN

Type:	AL8		Channel:	47
Directivity:	Numeric	dBd	Location:	
Main Lobe:	8.68	9.39	Beam Tilt:	-1.75
Horizontal:	7.30	8.63	Polarization:	Horizontal



Preliminary, subject to final design and review.

TABULATED DATA FOR ELEVATION PATTERN

Type: AL8

Polarization Horizontal

ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB
5.00	0.107	-19.41	-6.75	0.433	-7.27	-27.00	0.089	-21.01	-50.50
4.75	0.147	-16.65	-7.00	0.396	-8.05	-27.50	0.104	-19.66	-51.00
4.50	0.189	-14.47	-7.25	0.361	-8.84	-28.00	0.114	-18.86	-51.50
4.25	0.232	-12.69	-7.50	0.330	-9.63	-28.50	0.121	-18.34	-52.00
4.00	0.277	-11.15	-7.75	0.303	-10.37	-29.00	0.124	-18.13	-52.50
3.75	0.322	-9.84	-8.00	0.281	-11.03	-29.50	0.123	-18.20	-53.00
3.50	0.368	-8.68	-8.25	0.264	-11.57	-30.00	0.118	-18.56	-53.50
3.25	0.413	-7.67	-8.50	0.253	-11.94	-30.50	0.109	-19.25	-54.00
3.00	0.460	-6.74	-8.75	0.248	-12.09	-31.00	0.098	-20.18	-54.50
2.75	0.506	-5.92	-9.00	0.249	-12.08	-31.50	0.084	-21.51	-55.00
2.50	0.551	-5.18	-9.25	0.255	-11.89	-32.00	0.068	-23.35	-55.50
2.25	0.596	-4.50	-9.50	0.263	-11.60	-32.50	0.050	-26.02	-56.00
2.00	0.639	-3.89	-9.75	0.273	-11.28	-33.00	0.032	-29.90	-56.50
1.75	0.681	-3.33	-10.00	0.284	-10.93	-33.50	0.016	-35.92	-57.00
1.50	0.722	-2.83	-10.50	0.307	-10.26	-34.00	0.013	-37.72	-57.50
1.25	0.760	-2.38	-11.00	0.325	-9.76	-34.50	0.028	-31.06	-58.00
1.00	0.797	-1.97	-11.50	0.336	-9.47	-35.00	0.043	-27.33	-58.50
0.75	0.831	-1.61	-12.00	0.340	-9.37	-35.50	0.057	-24.88	-59.00
0.50	0.862	-1.29	-12.50	0.334	-9.53	-36.00	0.070	-23.10	-59.50
0.25	0.891	-1.00	-13.00	0.321	-9.87	-36.50	0.080	-21.94	-60.00
0.00	0.917	-0.75	-13.50	0.300	-10.46	-37.00	0.087	-21.21	-60.50
-0.25	0.939	-0.55	-14.00	0.273	-11.28	-37.50	0.092	-20.72	-61.00
-0.50	0.958	-0.37	-14.50	0.242	-12.32	-38.00	0.094	-20.54	-61.50
-0.75	0.974	-0.23	-15.00	0.208	-13.64	-38.50	0.093	-20.63	-62.00
-1.00	0.986	-0.12	-15.50	0.175	-15.14	-39.00	0.089	-21.01	-62.50
-1.25	0.994	-0.05	-16.00	0.145	-16.77	-39.50	0.082	-21.72	-63.00
-1.50	0.999	-0.01	-16.50	0.123	-18.20	-40.00	0.073	-22.73	-63.50
-1.75	1.000	0.00	-17.00	0.114	-18.86	-40.50	0.063	-24.01	-64.00
-2.00	0.997	-0.03	-17.50	0.118	-18.56	-41.00	0.050	-26.02	-64.50
-2.25	0.990	-0.08	-18.00	0.130	-17.72	-41.50	0.036	-28.87	-65.00
-2.50	0.981	-0.17	-18.50	0.147	-16.65	-42.00	0.021	-33.56	-65.50
-2.75	0.967	-0.29	-19.00	0.162	-15.81	-42.50	0.006	-44.44	-66.00
-3.00	0.951	-0.44	-19.50	0.173	-15.24	-43.00	0.012	-38.42	-66.50
-3.25	0.931	-0.63	-20.00	0.180	-14.89	-43.50	0.028	-31.06	-67.00
-3.50	0.907	-0.85	-20.50	0.182	-14.80	-44.00	0.044	-27.13	-67.50
-3.75	0.881	-1.11	-21.00	0.178	-14.99	-44.50	0.059	-24.58	-68.00
-4.00	0.852	-1.39	-21.50	0.169	-15.44	-45.00	0.073	-22.73	-68.50
-4.25	0.820	-1.72	-22.00	0.156	-16.14	-45.50	0.086	-21.31	-69.00
-4.50	0.786	-2.09	-22.50	0.138	-17.20	-46.00	0.097	-20.26	-69.50
-4.75	0.750	-2.49	-23.00	0.117	-18.64	-46.50	0.107	-19.41	-70.00
-5.00	0.713	-2.94	-23.50	0.093	-20.63	-47.00	0.115	-18.79	-70.50
-5.25	0.674	-3.43	-24.00	0.069	-23.22	-47.50	0.121	-18.34	-71.00
-5.50	0.634	-3.96	-24.50	0.047	-26.56	-48.00	0.125	-18.06	-71.50
-5.75	0.593	-4.54	-25.00	0.033	-29.63	-48.50	0.127	-17.92	-72.00
-6.00	0.552	-5.16	-25.50	0.037	-28.64	-49.00	0.127	-17.92	-72.50
-6.25	0.512	-5.81	-26.00	0.054	-25.35	-49.50	0.125	-18.06	-73.00
-6.50	0.472	-6.52	-26.50	0.072	-22.85	-50.00	0.122	-18.27	-73.50

Preliminary, subject to final design and review.