

TECHNICAL EXHIBIT  
AMENDMENT TO  
APPLICATION FOR CONSTRUCTION PERMIT  
LOW POWER TV STATION KTFA-LP  
FCC FILE NO. BPTT-20020204AAR  
FACILITY ID 35085  
ALBUQUERQUE, NEW MEXICO  
CH 48 150 KW (MAX-DA)

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of an amendment to the pending application for construction permit for Low Power TV station KTFA-LP at Albuquerque, New Mexico (Facility ID: 35085; File No. BPTT-20020204AAR). The purpose of this application is to change directional antenna system, increase the effective radiated power (ERP), add a "zero" carrier frequency offset and correct the overall tower height for the existing KTFA-LP tower. No other changes are proposed, including no change in transmitter site, city of license, channel or antenna radiation center height above mean sea level (RCAMSL). The instant application is considered a "minor change" in facilities pursuant to Section 73.3572.

Proposed Facilities

It is proposed to operate on KTFA-LP'S current channel 48 (674-680 MHz) with a "zero" carrier frequency offset using an Andrew ALP16L2-HSP "off-the-shelf" directional antenna (FCC antenna ID 16532) oriented at 310° true. The maximum ERP will be 150 kW. The antenna will be mounted at the 20 meter level on the existing tower.

Response to Paragraph 6 - Antenna Structure Registration Number

The FCC's engineering database as well as the KTFA-LP license (BLTTL-19880613IG) "incorrectly" indicate that the overall height of the KTFA-LP tower is 129 meters above ground level. However, based on a site survey the actual height of the tower is 30.5 meters (100 feet). This application reflects the correct tower height. In addition, the FCC's TOWAIR program indicates that the KTFA-LP tower structure does not require registration. The FCC will also be

notified of the correct data in order to update the KTFA-LP license.

Response to Paragraph 13(a) - TV Broadcast Analog Protection

A study has been conducted using the provisions of Section 74.705 which indicates that the proposed KTFA-LP operation will not create prohibited interference to other existing, authorized or proposed NTSC full-power stations with the exception of the licensed (BLCT-19960111KG) and authorized (BPCT-20010320AAD) operations of KASY-TV on channel 50 at Albuquerque, New Mexico. Therefore, waiver of Section 74.705 is requested with respect to KASY-TV. Justification for the waiver request is provided below.

Station KASY-TV operates on a second upper adjacent channel to the proposed KTFA-LP operation. Section 74.705 specifies a minimum distance separation of 32 kilometers towards KASY-TV for LPTV stations operating in excess of 50 kW, whereas the actual distance is 0.0 kilometer to the licensed KASY-TV operation and 0.2 kilometer to the authorized KASY-TV operation. Therefore, the proposed KTFA-LP operation will be short-spaced to the licensed and authorized KASY-TV operations by 32 kilometers and 31.8 kilometers, respectively.

The 32 kilometer separation requirement between second adjacent channel full service NTSC and LPTV stations is designed to prevent "cross modulation" and "intermodulation" interference. In cross modulation interference, the modulation of the undesired channel is superimposed on the modulation of the desired channel. The potential for cross modulation interference was analyzed based on OET Bulletin No. 69 which indicates that no interference is calculated to occur to KASY-TV's licensed and authorized operations. The results of the OET Bulletin No. 69 analysis are attached as Figure 1.

Intermodulation interference results from the combination of the proposed KTFA-LP channel 48 and KASY-TV channel 50 signals (visual carriers only) in a receiver to generate a signal which falls within the pass-band of a "desired" third signal. For the KTFA-LP channel 48/KASY-TV channel 50 combination, the desired signal will not be either

channel 48 or channel 50. For the KTFA-LP channel 48/KASY-TV channel 50 combination, the intermodulation products fall on channels 46 and 52. If there are viewable signals on those channels in the vicinity of the proposed KTFA-LP channel 48 service area there will be a potential for interference. Our studies indicate that there are no viewable full-service NTSC signals on these channels in the area with the closest full-service station on either channel located over 500 km from the KTFA-LP transmitter site (KXGR, Ch. 46, Green Valley, AZ, 502 km). Therefore, interference is not likely to occur.

Response to Paragraph 13(b) - DTV Station Protection

Calculations based on OET Bulletin No. 69 indicate that the proposed KTFA-LP operation on channel 48 complies with the FCC's 0.5% interference threshold criteria to all allotted, proposed or actual DTV operating facilities on channels 47, 48 and 49. Figure 2 provides the output of study based on OET-69 Bulletin which demonstrates that the proposed KTFA-LP operation complies with the FCC's DTV interference criteria.

Response to Paragraph 13(c) - LPTV/TV Translator/Class A TV Protection

A study has been conducted which indicates that the KTFA-LP proposal will not create prohibited interference to other existing, authorized or proposed LPTV stations with the exceptions of the following:

K57CF, Ch. 48, Carrizozo, NM (CP, BPTT-20000724ABC)  
K48HL, Ch. 48, Datil/Horse Springs, NM (License, BLTT-20010906AAA)  
K48HJ, Ch. 48, Des Moines, IA (CP, BNPTT-20000823AGC)  
K48AX, Ch. 48, Eagle Nest, NM (License, BLTT-19950802JF)  
K48GD, Ch. 48, Gallina, NM (License, BLTT-20000728ACE)  
K48GD, Ch. 48, Gallina, NM (Application, BMAPTT-20000829AWM)  
K48GK, Ch. 48, Gallup, NM (CP, BPTT-19981118JC)  
K48AW, Ch. 48, Shiprock, NM (License, BLTTL-19930708JF)  
New, Ch. 48, Espanola, NM (Application, BNPTT-20000816ACN)

However, based on the provisions of the OET-69 Bulletin as permitted by FCC rules [Section 74.707(e)] it is believed that KTFA-LP's proposed operation complies with the FCC's interference criteria towards these stations. Specifically, calculations have been made using the procedures outlined in

the FCC's OET-69 Bulletin and a 2 square kilometer grid. The results of the OET Bulletin No. 69 study are tabulated on Figure 3 and, as indicated, the proposal complies with the FCC's 0.5% interference threshold. It is noted that a "masking" study was conducted with respect to the pending application for channel 48 at Espanola, NM (BNPTT-20000816ACN) which is attached as Figure 4 and the results indicate that all interference is currently masked by the licensed KTFA-LP operation.

Response to Paragraph 14 - Environmental Protection Act

The proposed KTFA-LP LPTV facilities were evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation." The calculated power density at the base of the tower was calculated using the appropriate equation on Page 13 of the Bulletin. Using a greater than expected vertical relative field value of 0.15 towards the tower base (see vertical plane relative field pattern attached as Figure 5), a maximum visual effective radiated power of 150 kilowatts and 10 percent aural power, the calculated power density at 2 meters above ground level at the base of the tower is 0.1740 milliwatt per square centimeter ( $\text{mW}/\text{cm}^2$ ), or 38.6 percent of the Commission's recommended limit applicable to general population/uncontrolled exposure areas ( $0.45 \text{ mW}/\text{cm}^2$  for TV channel 48) and 7.7 percent of the Commission's recommended limit applicable to controlled exposure areas ( $2.26 \text{ mW}/\text{cm}^2$  for TV channel 48). If necessary, measurements will be made to substantiate compliance with the 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 in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that 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.

In addition, it appears that the existing tower is otherwise excluded from environmental processing as it complies with all the criteria for such an exclusion in Section 1.1306.

W. Jeffrey Reynolds

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 34237  
JEFF@DLR.COM

March 13, 2002

OET-69 NTSC INTERFERENCE CAUSED STUDY

CELL SIZE : 2.00  
 Using offset in determining thresholds  
 Per 6th Report & Order and FCC OET-69 Bulletin

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KASY-2 35-12-48 106-27-00 50(Z) 1399.000 kw 3301 m 50.0 % 65.0 dBu  
 ALBUQUERQUE NM 31739 729 FCC NTSC BL: 749899 FCC IX POP%: 0.0  
 CP BPCT20010320AAD

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	40156.95	753052
not affected by terrain losses	33011.62	732157

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KTFAP1 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8

ALBUQUERQUE NM

LIC BLTTL19880613IG

0.73	0.74	0.78	0.83	0.90	0.95	0.99	1.00	0.97	0.92	0.83	0.72
0.58	0.45	0.33	0.26	0.26	0.29	0.31	0.29	0.26	0.26	0.33	0.45
0.58	0.72	0.83	0.92	0.97	1.00	0.99	0.95	0.90	0.83	0.78	0.74

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -26.00

	Area	Pop
Interference	0	0

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KASY-T 35-12-40 106-26-57 50(Z) 1410.000 kw 3289 m 50.0 % 65.0 dBu  
 ALBUQUERQUE NM 31739 729 FCC NTSC BL: 749899 FCC IX POP%: 0.0  
 LIC BLCT19960111KG

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	39988.16	752237
not affected by terrain losses	32850.27	732532

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KTFAP1 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8

ALBUQUERQUE NM

LIC BLTTL19880613IG

0.73	0.74	0.78	0.83	0.90	0.95	0.99	1.00	0.97	0.92	0.83	0.72
0.58	0.45	0.33	0.26	0.26	0.29	0.31	0.29	0.26	0.26	0.33	0.45
0.58	0.72	0.83	0.92	0.97	1.00	0.99	0.95	0.90	0.83	0.78	0.74

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -26.00

	Area	Pop
Interference	0	0

Summary of Calculations

Facility	Channel	Type	Baseline	Permissible	IX	%Base
KASY-2, ALBUQUERQUE, NM	50	TV	749899	0.5	0	0.00
KASY-T, ALBUQUERQUE, NM	50	TV	749899	0.5	0	0.00

OET-69 DTV INTERFERENCE CAUSED STUDY

CELL SIZE : 2.00  
Using offset in determining thresholds  
Per 6th Report & Order and FCC OET-69 Bulletin

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DKZIA 32-02-30 106-27-41 47(0) 200.000 kw 1399 m DA 90.0 % 41.7 dBu  
LAS CRUCES NM 7570 599 DTVSERVICE: 599000 NTSCSERVICE: 571000  
DTVALT DTV ALLOTMENT

0.20	0.23	0.23	0.20	0.14	0.19	0.27	0.29	0.23	0.15	0.15	0.21
0.27	0.27	0.28	0.43	0.73	0.97	0.98	0.82	0.59	0.38	0.24	0.19
0.19	0.18	0.17	0.22	0.35	0.58	0.82	1.00	1.00	0.77	0.44	0.24

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	10281.61	717131
not affected by terrain losses	8141.437	606201

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KTFAP2 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8  
ALBUQUERQUE NM

LIC BLTTTL19880613IG

0.73	0.74	0.78	0.83	0.90	0.95	0.99	1.00	0.97	0.92	0.83	0.72
0.58	0.45	0.33	0.26	0.26	0.29	0.31	0.29	0.26	0.26	0.33	0.45
0.58	0.72	0.83	0.92	0.97	1.00	0.99	0.95	0.90	0.83	0.78	0.74

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -49.00

Interference	Area	Pop
	0	0

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KTYO 32-02-30 106-27-41 47(N) 52.500 kw 1399 m DA 90.0 % 41.7 dBu  
LAS CRUCES NM 7570 599 DTVSERVICE: 599000 NTSCSERVICE: 571000  
CP BPCDT19990709LE

0.31	0.20	0.18	0.20	0.22	0.25	0.27	0.27	0.25	0.22	0.20	0.18
0.20	0.31	0.47	0.67	0.85	0.97	1.00	0.93	0.78	0.57	0.37	0.23
0.19	0.19	0.23	0.37	0.57	0.78	0.93	1.00	0.97	0.85	0.67	0.47

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	8678.907	714237
not affected by terrain losses	6778.649	578320

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KTFAP2 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8  
ALBUQUERQUE NM

LIC BLTTTL19880613IG

0.73	0.74	0.78	0.83	0.90	0.95	0.99	1.00	0.97	0.92	0.83	0.72
0.58	0.45	0.33	0.26	0.26	0.29	0.31	0.29	0.26	0.26	0.33	0.45
0.58	0.72	0.83	0.92	0.97	1.00	0.99	0.95	0.90	0.83	0.78	0.74

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -49.00

Interference	Area	Pop
	0	0

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KXGR 32-24-54 110-42-56 47(N) 1000.000 kw 2641.9 m 90.0 % 41.7 dBu  
GREEN VALLEY AZ 25960 632 DTVSERVICE: 632000 NTSCSERVICE: 614000  
APP BPCDT20000501AEM

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	62250.26	910379
not affected by terrain losses	44466.77	731637

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KTFAP2 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8

ALBUQUERQUE NM

LIC BLTTL19880613IG

0.73	0.74	0.78	0.83	0.90	0.95	0.99	1.00	0.97	0.92	0.83	0.72
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0.58	0.45	0.33	0.26	0.26	0.29	0.31	0.29	0.26	0.26	0.33	0.45
------	------	------	------	------	------	------	------	------	------	------	------

0.58	0.72	0.83	0.92	0.97	1.00	0.99	0.95	0.90	0.83	0.78	0.74
------	------	------	------	------	------	------	------	------	------	------	------

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -49.00

	Area	Pop
Interference	0	0

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DKXGR 32-24-54 110-42-56 47(0) 72.000 kw 2642 m DA 90.0 % 41.7 dBu  
GREEN VALLEY AZ 25960 632 DTVSERVICE: 632000 NTSCSERVICE: 614000  
DTVALT DTV ALLOTMENT

0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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0.99	0.99	0.98	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
------	------	------	------	------	------	------	------	------	------	------	------

0.99	0.98	0.96	0.93	0.93	0.93	0.93	0.93	0.94	0.95	0.97	0.98
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( 39.0 1.00)( 95.0 1.00)(185.0 1.00)(189.0 1.00)

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	38996.51	815363
not affected by terrain losses	26391.13	629190

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KTFAP2 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8

ALBUQUERQUE NM

LIC BLTTL19880613IG

0.73	0.74	0.78	0.83	0.90	0.95	0.99	1.00	0.97	0.92	0.83	0.72
------	------	------	------	------	------	------	------	------	------	------	------

0.58	0.45	0.33	0.26	0.26	0.29	0.31	0.29	0.26	0.26	0.33	0.45
------	------	------	------	------	------	------	------	------	------	------	------

0.58	0.72	0.83	0.92	0.97	1.00	0.99	0.95	0.90	0.83	0.78	0.74
------	------	------	------	------	------	------	------	------	------	------	------

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -49.00

	Area	Pop
Interference	0	0

### Summary of Calculations

Facility	Channel	Type	Baseline	Permissible	IX	%Base
DKZIA, LAS CRUCES, NM	47	DTV	599000	0.5	0	0.00
KTYO, LAS CRUCES, NM	47	DTV	599000	0.5	0	0.00
KXGR, GREEN VALLEY, AZ	47	DTV	632000	0.5	0	0.00
DKXGR, GREEN VALLEY, AZ	47	DTV	632000	0.5	0	0.00



**OET-69 LPTV/CLASS A INTERFERENCE CAUSED STUDY**

CELL SIZE : 2.00  
Using offset in determining thresholds  
Per 6th Report & Order and FCC OET-69 Bulletin

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**K57CF 33-49-34 106-14-54 48(Z) 4.209 kw 2157 m DA 50.0 % 74.8 dBu**  
**CARRIZOZO ETC. NM**  
**CP BPTT20000724ABC**

1.00	0.81	0.43	0.17	0.09	0.06	0.06	0.06	0.06	0.06	0.06	0.07
0.08	0.07	0.07	0.05	0.03	0.03	0.03	0.03	0.03	0.05	0.07	0.07
0.08	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.10	0.17	0.43	0.81

Ref Az: 120.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	144.5914	5
not affected by terrain losses	124.5092	5

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**KTFAP3 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8**  
**ALBUQUERQUE NM**  
**LIC BLTTL19880613IG**

0.73	0.74	0.78	0.83	0.90	0.95	0.99	1.00	0.97	0.92	0.83	0.72
0.58	0.45	0.33	0.26	0.26	0.29	0.31	0.29	0.26	0.26	0.33	0.45
0.58	0.72	0.83	0.92	0.97	1.00	0.99	0.95	0.90	0.83	0.78	0.74

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 45.00

	Area	Pop
<b>Interference</b>	<b>12.05</b>	<b>0( 0.0)</b>

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**K48HL 33-46-15 107-51-18 48(-) 1.220 kw 2741 m 50.0 % 74.8 dBu**  
**DATIL/HORSE SPRINGS NM**  
**LIC BLTT20010906AAA**

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	907.9023	93
not affected by terrain losses	791.4016	0

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**KTFAP3 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8**  
**ALBUQUERQUE NM**  
**LIC BLTTL19880613IG**

0.73	0.74	0.78	0.83	0.90	0.95	0.99	1.00	0.97	0.92	0.83	0.72
0.58	0.45	0.33	0.26	0.26	0.29	0.31	0.29	0.26	0.26	0.33	0.45
0.58	0.72	0.83	0.92	0.97	1.00	0.99	0.95	0.90	0.83	0.78	0.74

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 28.00

	Area	Pop
<b>Interference</b>	<b>4.02</b>	<b>0( 0.0)</b>

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**K48HJ 36-42-19 103-52-38 48(Z) 1.300 kw 2666 m 50.0 % 74.8 dBu**

**DES MOINES NM**

**CP BNPTT20000823AGC**

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	1287.609	450
not affected by terrain losses	1275.537	450

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**KTFAP3 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8**

**ALBUQUERQUE NM**

**LIC BLTTL19880613IG**

0.73	0.74	0.78	0.83	0.90	0.95	0.99	1.00	0.97	0.92	0.83	0.72
0.58	0.45	0.33	0.26	0.26	0.29	0.31	0.29	0.26	0.26	0.33	0.45
0.58	0.72	0.83	0.92	0.97	1.00	0.99	0.95	0.90	0.83	0.78	0.74

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 45.00

	Area	Pop
<b>Interference</b>	<b>0</b>	<b>0</b>

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**K48AX 36-38-28 105-13-48 48(+) 1.320 kw 3551 m 50.0 % 74.8 dBu**

**EAGLE NEST NM**

**LIC BLTT19950802JF**

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	1494.324	965
not affected by terrain losses	1425.851	676

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**KTFAP3 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8**

**ALBUQUERQUE NM**

**LIC BLTTL19880613IG**

0.73	0.74	0.78	0.83	0.90	0.95	0.99	1.00	0.97	0.92	0.83	0.72
0.58	0.45	0.33	0.26	0.26	0.29	0.31	0.29	0.26	0.26	0.33	0.45
0.58	0.72	0.83	0.92	0.97	1.00	0.99	0.95	0.90	0.83	0.78	0.74

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 28.00

	Area	Pop
<b>Interference</b>	<b>12.08</b>	<b>0( 0.0)</b>

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**K48GD2 36-13-14 106-45-42 48(+) 0.500 kw 2790 m DA 50.0 % 74.8 dBu**

**GALLINA NM**

**APP BMAPTT20000829AWM**

1.00	0.94	0.83	0.80	0.93	1.00	0.98	0.92	0.83	0.71	0.58	0.41
0.14	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0.13	0.40	0.56	0.71	0.82	0.92	0.98	0.98	0.89	0.78	0.83	0.95

Ref Az: 270.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	195.8967	362

not affected by terrain losses 179.9051 344

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KTFAP3 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8

ALBUQUERQUE NM

LIC BLTTL19880613IG

0.73 0.74 0.78 0.83 0.90 0.95 0.99 1.00 0.97 0.92 0.83 0.72

0.58 0.45 0.33 0.26 0.26 0.29 0.31 0.29 0.26 0.26 0.33 0.45

0.58 0.72 0.83 0.92 0.97 1.00 0.99 0.95 0.90 0.83 0.78 0.74

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 28.00

	Area	Pop
Interference	0	0

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K48GD 36-13-14 106-45-42 48(+) 0.425 kw 2777 m DA 50.0 % 74.8 dBu

GALLINA NM

LIC BLTT20000728ACE

1.00 0.80 0.40 0.15 0.09 0.07 0.06 0.06 0.06 0.06 0.07 0.07

0.08 0.08 0.06 0.03 0.03 0.03 0.03 0.03 0.04 0.04 0.07 0.07

0.08 0.08 0.06 0.06 0.06 0.06 0.06 0.06 0.09 0.18 0.46 0.81

( 5.0 0.95)(355.0 0.95)

Ref Az: 272.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	55.98415	262
not affected by terrain losses	51.98528	244

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KTFAP3 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8

ALBUQUERQUE NM

LIC BLTTL19880613IG

0.73 0.74 0.78 0.83 0.90 0.95 0.99 1.00 0.97 0.92 0.83 0.72

0.58 0.45 0.33 0.26 0.26 0.29 0.31 0.29 0.26 0.26 0.33 0.45

0.58 0.72 0.83 0.92 0.97 1.00 0.99 0.95 0.90 0.83 0.78 0.74

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 28.00

	Area	Pop
Interference	0	0

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K48GK 35-32-08 108-44-28 48(N) 1.180 kw 2071 m 50.0 % 74.8 dBu

GALLUP NM

CP BPTT19981118JC

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	80.67671	17411
not affected by terrain losses	80.67671	17411

\*\*\*\*\*

KTFAP3 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8

ALBUQUERQUE NM

LIC BLTTL19880613IG

0.73 0.74 0.78 0.83 0.90 0.95 0.99 1.00 0.97 0.92 0.83 0.72

0.58 0.45 0.33 0.26 0.26 0.29 0.31 0.29 0.26 0.26 0.33 0.45

0.58 0.72 0.83 0.92 0.97 1.00 0.99 0.95 0.90 0.83 0.78 0.74  
Ref Az: 310.0  
Using DEFAULT vertical antenna pattern

D/U Baseline: 45.00

Interference	Area 0	Pop 0
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\*\*\*\*\*

**K48AW** 36-48-16 108-41-41 48(N) 0.578 kw 1542 m DA 50.0 % 74.8 dBu  
**SHIPROCK** NM  
**LIC** BLTTL19930708JF

1.00	0.94	0.83	0.80	0.93	1.00	0.98	0.92	0.83	0.71	0.58	0.41
0.14	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0.13	0.40	0.56	0.71	0.82	0.92	0.98	0.98	0.89	0.78	0.83	0.95

Ref Az: 225.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	40.18751	4535
not affected by terrain losses	40.18751	4535

\*\*\*\*\*

**KTFAP3** 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8  
**ALBUQUERQUE** NM  
**LIC** BLTTL19880613IG

0.73	0.74	0.78	0.83	0.90	0.95	0.99	1.00	0.97	0.92	0.83	0.72
0.58	0.45	0.33	0.26	0.26	0.29	0.31	0.29	0.26	0.26	0.33	0.45
0.58	0.72	0.83	0.92	0.97	1.00	0.99	0.95	0.90	0.83	0.78	0.74

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 45.00

Interference	Area 0	Pop 0
--------------	-----------	----------

\*\*\*\*\*

**NEW** 35-53-55 105-53-52 48(-) 0.570 kw 2434 m DA 50.0 % 74.8 dBu  
**ESPANOLA** NM  
**APP** BNPTT20000816ACN

1.00	0.94	0.83	0.80	0.93	1.00	0.98	0.92	0.83	0.71	0.58	0.41
0.14	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
0.13	0.40	0.56	0.71	0.82	0.92	0.98	0.98	0.89	0.78	0.83	0.95

Ref Az: 350.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	224.7530	6847
not affected by terrain losses	216.7261	5916

\*\*\*\*\*

**KTFAP3** 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8  
**ALBUQUERQUE** NM  
**LIC** BLTTL19880613IG

0.73	0.74	0.78	0.83	0.90	0.95	0.99	1.00	0.97	0.92	0.83	0.72
0.58	0.45	0.33	0.26	0.26	0.29	0.31	0.29	0.26	0.26	0.33	0.45
0.58	0.72	0.83	0.92	0.97	1.00	0.99	0.95	0.90	0.83	0.78	0.74

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 28.00

**Interference**                      **Area**                      **Pop**  
   **96.32**                      **950(13.9)**

**Summary of Calculations**

Facility	Channel	Type	Baseline	Permissible	IX	%Base
K57CF, CARRIZOZO ETC.,	48	TV	5	0.5	0	0.00
K48HL, DATIL/HORSE SPRI	48	TV	93	0.5	0	0.00
K48HJ, DES MOINES, NM	48	TV	450	0.5	0	0.00
K48AX, EAGLE NEST, NM	48	TV	965	0.5	0	0.00
K48GD2, GALLINA, NM	48	TV	362	0.5	0	0.00
K48GD, GALLINA, NM	48	TV	262	0.5	0	0.00
K48GK, GALLUP, NM	48	TV	17411	0.5	0	0.00
K48AW, SHIPROCK, NM	48	TV	4535	0.5	0	0.00
NEW, ESPANOLA, NM	48	TV	6847	0.5	950	13.87**

\*\* (See masking study attached as Figure 4)

OET-69 LPTV INTERFERENCE RECEIVED (MASKING) STUDY

CELL SIZE : 2.00

Using offset in determining thresholds

Per 6th Report &amp; Order and FCC OET-69 Bulletin

\*\*\*\*\*

NEW 35-53-55 105-53-52 48(-) 0.570 kw 2434 m DA 50.0 % 74.8 dBu

ESPANOLA NM

APP BNPTT20000816ACN

1.00 0.94 0.83 0.80 0.93 1.00 0.98 0.92 0.83 0.71 0.58 0.41

0.14 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02 0.02

0.13 0.40 0.56 0.71 0.82 0.92 0.98 0.98 0.89 0.78 0.83 0.95

Ref Az: 350.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	224.7530	6847
not affected by terrain losses	216.7261	5916

\*\*\*\*\*

KTFAP3 35-12-41 106-26-56 48(Z) 150.000 kw 3263 m DA 10.0 % 74.8 dBu

ALBUQUERQUE NM

LIC null

0.73 0.74 0.78 0.83 0.90 0.95 0.99 1.00 0.97 0.92 0.83 0.72

0.58 0.45 0.33 0.26 0.26 0.29 0.31 0.29 0.26 0.26 0.33 0.45

0.58 0.72 0.83 0.92 0.97 1.00 0.99 0.95 0.90 0.83 0.78 0.74

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 28.00

	Area	Pop
Interference	96.32	950(13.9)

\*\*\*\*\*

KTFA-L 35-12-41 106-26-56 48(N) 33.100 kw 3263 m DA 10.0 % 74.8 dBu

ALBUQUERQUE NM

LIC BLTTL19880613IG

1.00 0.97 0.92 0.83 0.68 0.52 0.38 0.28 0.23 0.20 0.19 0.19

0.20 0.22 0.24 0.27 0.28 0.28 0.29 0.28 0.28 0.27 0.24 0.22

0.20 0.19 0.19 0.20 0.23 0.28 0.38 0.52 0.68 0.83 0.92 0.97

Ref Az: 225.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 45.00

	Area	Pop
Interference	96.32	950(13.9)

\*\*\*\*\*

lost to NTSC IX	96.32	950
lost to additional IX by DTV	0.00	0
total lost to DTV IX	0.00	0

CallSign	No.cells	Unq Area	Unq Pop
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lost to all IX		96.32	950
----------------	--	-------	-----

Total SERVICE		120.40	4966
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All interference from the study station was masked.



**ANDREW**

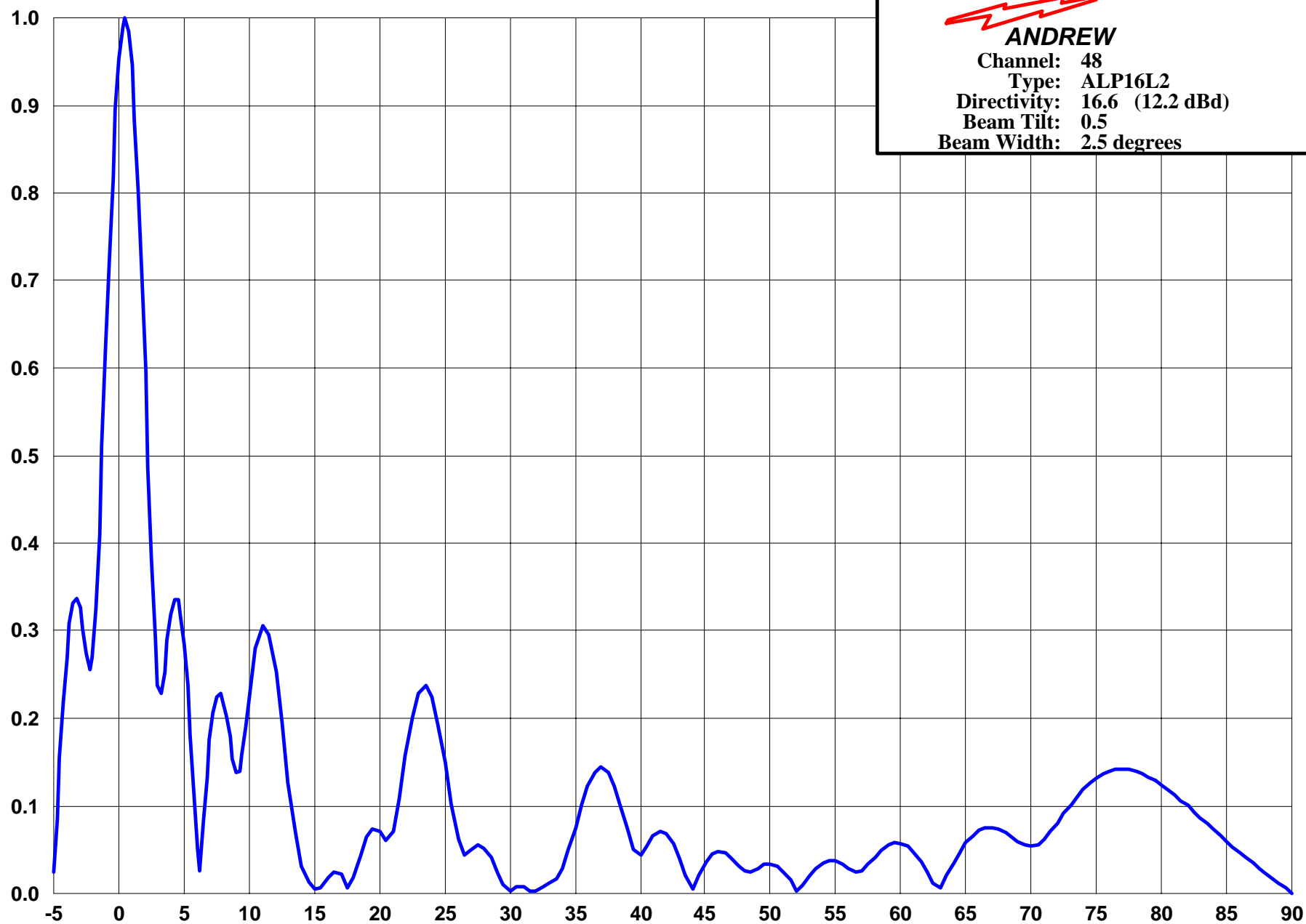
Channel: 48

Type: ALP16L2

Directivity: 16.6 (12.2 dBd)

Beam Tilt: 0.5

Beam Width: 2.5 degrees



ANDREW CORPORATION  
10500 W. 153rd Street  
Orland Park, Illinois U.S.A. 60462

**FIGURE 5**