

TECHNICAL EXHIBIT  
MINOR MODIFICATION OF CONSTRUCTION PERMIT  
LPTV STATION KOPE-LP (FACILITY ID 43440)  
TULSA, OKLAHOMA  
CH 51(+) 7.15 KW (MAX-DA)

Technical Narrative

The technical exhibit of which this narrative is part supports an application for minor modification of construction permit for low power television (LPTV) station KOPE-LP at Baton Rouge, Louisiana. Station KOPE-LP is licensed to operate on channel 51 with a directional antenna (DA) maximum visual effective radiated power (ERP) of 2 kilowatts (kW) and an antenna radiation center height above mean sea level (RCAMSL) of 426 meters (BLTTL-19990811JC). The current authorization is for a similar operation on the same channel and ERP, but at a different transmitter site (BPTTL-20010606AAR).

Proposed Facilities

This minor modification application proposes to further change transmitter site, change directional antenna, increase ERP and subsequently reduce antenna RCAMSL from the current authorization. The proposed transmitter site will be 36-05-41 N, 95-52-00 W (FCC tower registration number 1213828). Station KOPE-LP proposes to side-mount a Shively 4-bay directional antenna at the 82.3 meter (270 foot) level on a 91.4 meter (300 foot) tower. The proposed maximum visual ERP is 7.15 kW and the antenna RCAMSL is 285.9 meters.

The coverage map in Figure 2 indicates that both the authorized and proposed 74 dBu contours will encompass common land areas. Therefore, this application can be considered a minor change.

### NTSC Allocation Considerations

A study has been conducted using the provisions of Sections 74.705, 74.707 and 74.709 to assure that the proposal will not create prohibited interference with other licensed or authorized analog (NTSC) full-power TV, LPTV and Class A TV stations. No prohibited interference to any NTSC stations will be created by the proposed operation.

### DTV Allocation Considerations

Pertinent digital television (DTV) allotments and assignments on channels 50, 51 and 52 have been examined to determine if the proposal will cause prohibited contour overlap. Station KSBI-DT appears to be the only DTV station that will receive contour overlap from KOPE-LP. Interference calculations towards KSBI-DT have been conducted using the procedures outlined in the FCC's OET-69 Bulletin.<sup>1</sup> (see Figure 3).

Protected DTV Station	FCC Service Population	Proposed Interference Population
KSBI-DT, DTV allotment	992,000	0 (0.0%)
KSBI-DT(CP), DTV-51, Oklahoma City, OK	992,000	292 (0.3%)

The above calculated interference percentages are all less than 0.5 % and, therefore, can be considered "de minimis". The proposed KOPE-LP operation does not cause calculated interference to any other DTV assignment or allotment.

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. If necessary, a waiver of

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<sup>1</sup> The duTreil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 1 km was employed. An Alpha based processor computer system was employed. The results have been found to be in very close agreement with the results of the FCC implementation of OET Bulletin No. 69.

the FCC rules is respectfully requested based on no interference being caused to KSBI-DT using the procedures outlined in the FCC's OET-69 Bulletin.

Radiofrequency Electromagnetic Field Exposure

The proposed KOPE-LP facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. A maximum visual ERP of 7.15 kW with 10% aural power was assumed. A conservative relative field value of 0.5 was assumed for the Shively SMP4L5HSS directional antenna's downward radiation (see Figure 1). The calculated power density at a point 2 meters (6.6 feet) above ground level is  $0.0046 \text{ mW/cm}^2$ . This is 1% of the FCC's recommended limit of  $0.46 \text{ mW/cm}^2$  for channel 51 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. The proposed KOPE-LP operation appears to be otherwise categorically excluded from environmental processing as it complies with all the criteria for such an exclusion in Section 1.1306.



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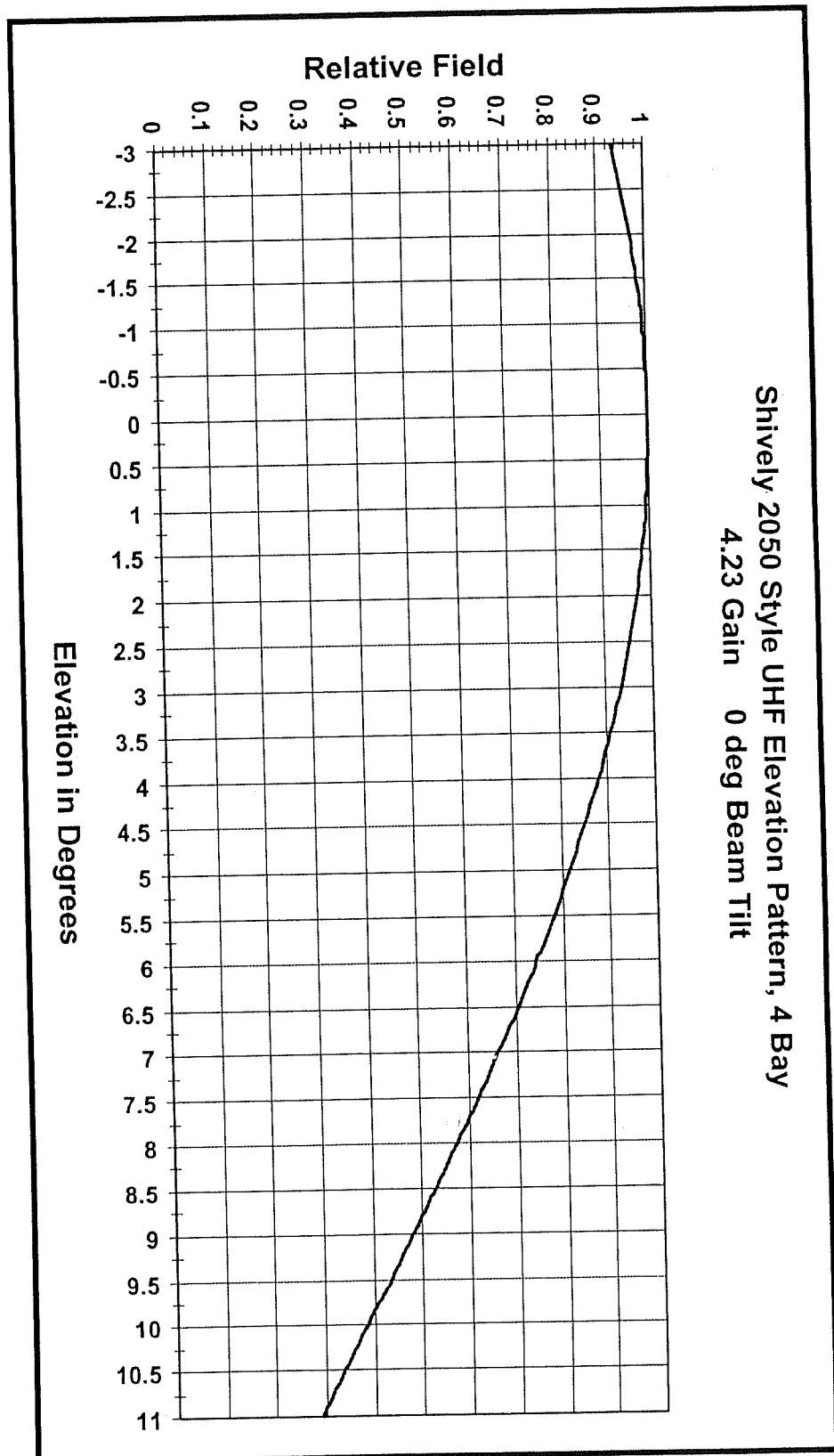
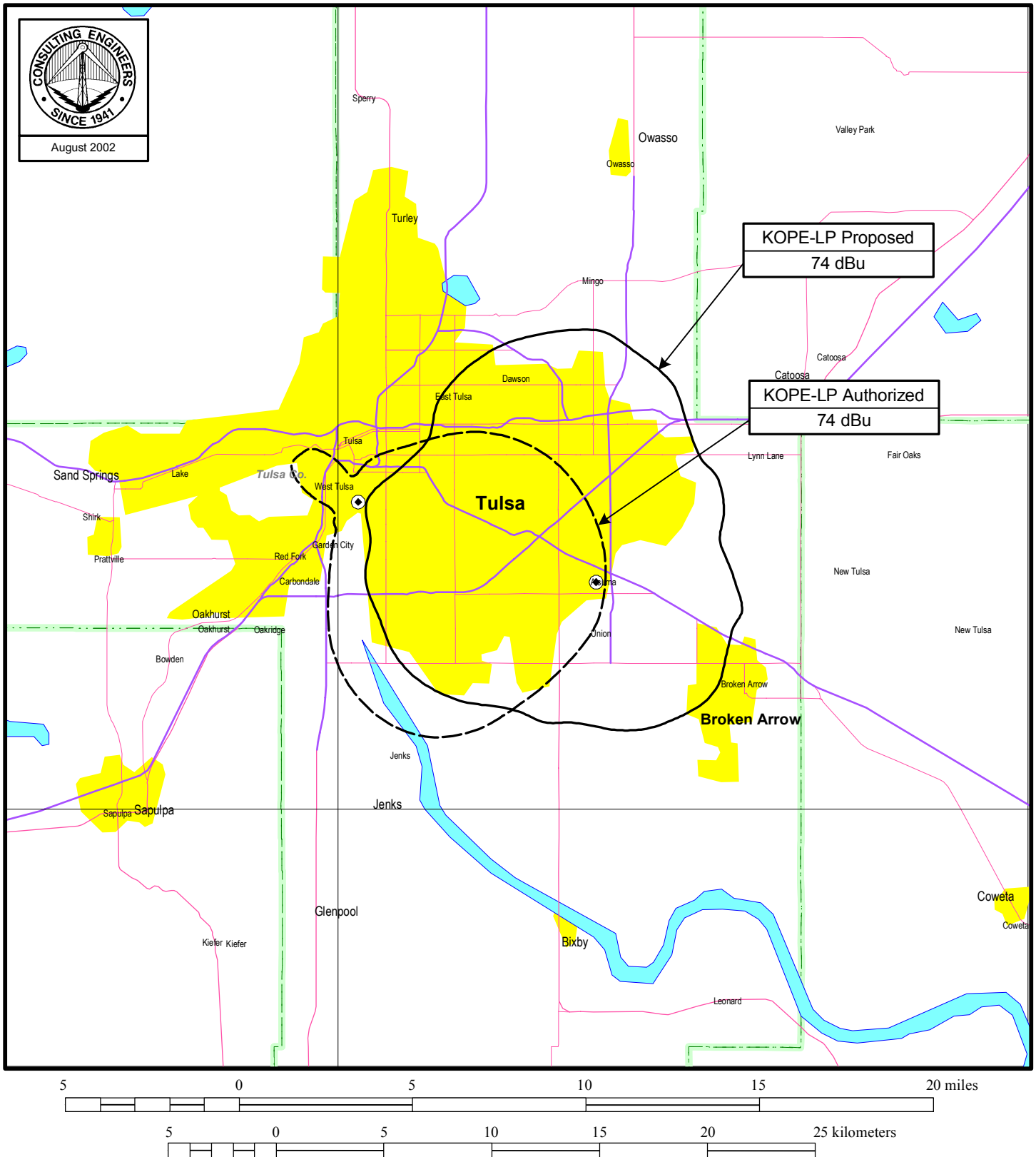


Figure 2



## **PREDICTED F(50,50) COVERAGE CONTOURS**

STATION KOPE-LP

TULSA, OKLAHOMA

CH 51(+) 7.15 KW (MAX-DA)

du Treil, Lundin & Rackley, Inc Sarasota, Florida

**INTERFERENCE CAUSED BY KOPE-LP TO KSBI-DT**

CELL SIZE : 2.00

Using offset in determining thresholds

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

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KSBI-DT 35-22-54 97-29-20 51(0) 50.0 kW-DA 556 m AMSL 90.0 % 42.0 dBu  
 OKLAHOMA CITY OK 11406 980 DTVSERVICE: 980000 NTSCSERVICE: 992000  
 DTVALT DTV ALLOTMENT  
 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
 1.00 0.99 0.99 0.99 0.99 0.99 0.99 1.00 1.00 1.00 1.00 1.00

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

USING NTSC GRADE B FOR SERVICE AREA

	Area	Pop
within Noise Limited Contour	11733.70	992852
not affected by terrain losses	11717.74	992654

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KOPE-LP 36-05-41 95-51-00 51(+) 7.15 kW 285.9 m AMSL 10.0 % 75.0  
 TULSA OK  
 1.00 0.99 0.96 0.92 0.85 0.78 0.71 0.63 0.55 0.47 0.40 0.34  
 0.29 0.28 0.30 0.34 0.37 0.40 0.41 0.40 0.37 0.34 0.30 0.28  
 0.29 0.34 0.40 0.47 0.55 0.63 0.71 0.78 0.85 0.92 0.96 0.99

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

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

\*\*\*\*\*

KSBI-DT 35-35-52 97-29-22 51(N) 1000.0 kW 806.4 m AMSL 90.0 % 42.0 dBu  
 OKLAHOMA CITY OK 11406 980 DTVSERVICE: 980000 NTSCSERVICE: 992000  
 CP BPCDT19991028AFH

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	37275.04	1285828
not affected by terrain losses	37009.02	1284811

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KOPE-LP 36-05-41 95-51-00 51(+) 7.15 kW 285.9 m AMSL 10.0 % 75.0  
 TULSA OK  
 1.00 0.99 0.96 0.92 0.85 0.78 0.71 0.63 0.55 0.47 0.40 0.34  
 0.29 0.28 0.30 0.34 0.37 0.40 0.41 0.40 0.37 0.34 0.30 0.28  
 0.29 0.34 0.40 0.47 0.55 0.63 0.71 0.78 0.85 0.92 0.96 0.99

Ref Az: 310.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

	Area	Pop
<b>Interference</b>	<b>36.28</b>	<b>292 (0.3%)</b>