

TECHNICAL EXHIBIT  
LPTV MINOR CHANGE APPLICATION  
FOR CONSTRUCTION PERMIT  
STATION KBPX-LP (FACILITY ID 17746)  
HOUSTON, TEXAS

JANUARY 7, 2003

CH 33(-) 90 KW-ND

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Technical Narrative

This technical exhibit supports a minor change application to modify low power television (LPTV) station KBPX-LP on channel 33 at Houston, Texas (Facility ID 17746). According to the Federal Communications Commission (FCC) database, station KBPX-LP is currently licensed to operate on channel 33 with a minus (-) carrier offset (BLTT-19920623JD). A directional antenna (DA) system is employed. The maximum visual effective radiated power (ERP) is 34.3 kilowatts (kW). The antenna center of radiation is 505 meters above ground level (AGL), and 529 meters above mean sea level (AMSL). The transmitter site coordinates are 29-34-34, 95-30-36 (NAD-27).

Proposed Facilities

Station KBPX-LP proposes to modify its operation by changing transmitter site, changing to a non-directional (ND) antenna system, increasing the ERP and reducing the antenna height. The FCC registration number for the proposed supporting structure is 1064696 and the site coordinates are 29-34-15, 95-30-37 (NAD-27). The proposed KBPX-LP site is approximately 0.6 kilometer south of the present site. There will be no proposed change in the channel (33), carrier offset (minus), or city of assignment (Houston, TX). It is proposed to install a Dielectric TLP-24A non-directional antenna system on the existing tower at the new site. The proposed antenna system will be installed with the center of radiation 292.3 meters AGL, and 315.7 meters AMSL (see Figure 1). The antenna system will incorporate an electrical beam tilt of 1.35 degrees. The proposed visual ERP at the radio

horizon will be 90 kW. The proposed ERP at the depression angle of 1.35 degrees will be 150 kW.

#### NTSC Allocation Considerations

A study has been conducted using the pertinent provisions of the FCC rules to assure that the proposal will not create prohibited interference with other authorized or pending analog (NTSC) full service TV, LPTV, Class A TV, and land mobile radio service (LMRS) stations. There are no LMRS reservations on pertinent channels in the area for protection from the proposed KBPX-LP channel 33 operation. The proposed KBPX-LP operation complies with the FCC's allocation standards with respect to all known analog assignments, except for the pending application for low power Class A station KVIT-LP on channel 34 at Victoria, Texas (BPTTA-20020122ABH, Facility ID 13200).

Station KVIT-LP proposes to change from its current operation on channel 28 at Victoria to channel 34 at Missouri City, Texas. The proposed KVIT-LP site is 166.9 kilometers northeast of the present KVIT-LP site. There is no overlap between the present and proposed KVIT-LP predicted 74 dBu contours. The KVIT-LP channel 34 application does not appear to comply with the FCC's displacement rules, Section 73.3572(a)(4). Therefore, it is believed the KVIT-LP channel 34 application does not require consideration from an allocation standpoint, and can be ignored.

The proposed KBPX-LP site is more than 1700 kilometers from the nearest point of the US/Canada border, and more than 400 kilometers from the closest point of the Mexican border. The proposed KBPX-LP site is 331 kilometers northeast of the FCC's closest monitoring station at Kingsville, Texas. The proposed KBPX-LP site is more than 1600 kilometers southwest of the National Radio Quiet Zone in Virginia/West Virginia. It is more than 1400 kilometers southeast of the Table Mountain Radio Quiet Zone in Colorado. The closest radio astronomy site operating on channel 37 is at Fort Davis, Texas, approximately 819 kilometers west of the proposed KBPX-LP site. These distances are sufficient to not be a coordination concern.

### DTV Allocation Considerations

Pertinent DTV allotments and assignments on channels 32, 33 and 34 have been examined using the procedures outlined in the FCC's OET-69 Bulletin.<sup>1</sup> The proposed KBPX-LP operation complies with the FCC's 0.5% acceptable interference threshold. 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 with respect to DTV assignments and allotments.

### Radiofrequency Electromagnetic Field Exposure

The proposed KBPX-LP facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. A visual ERP of 150 kW with 20% aural power was assumed. A conservative relative field value of 0.4 (-8 dB) was assumed for the antenna's downward radiation (see Figure 2). The calculated power density at a point 2 meters (6.6 feet) above ground level is 0.0057 mW/cm<sup>2</sup>. This is less than 2% of the FCC's recommended limit of 0.39 mW/cm<sup>2</sup> for channel 33 for an "uncontrolled" environment. It is less than 1% of the FCC's recommended limit for a "controlled" 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

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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. A Sun 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.

power or shut down. The proposed KBPX-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.

If there are questions concerning this technical exhibit, please communicate with the office of the undersigned.

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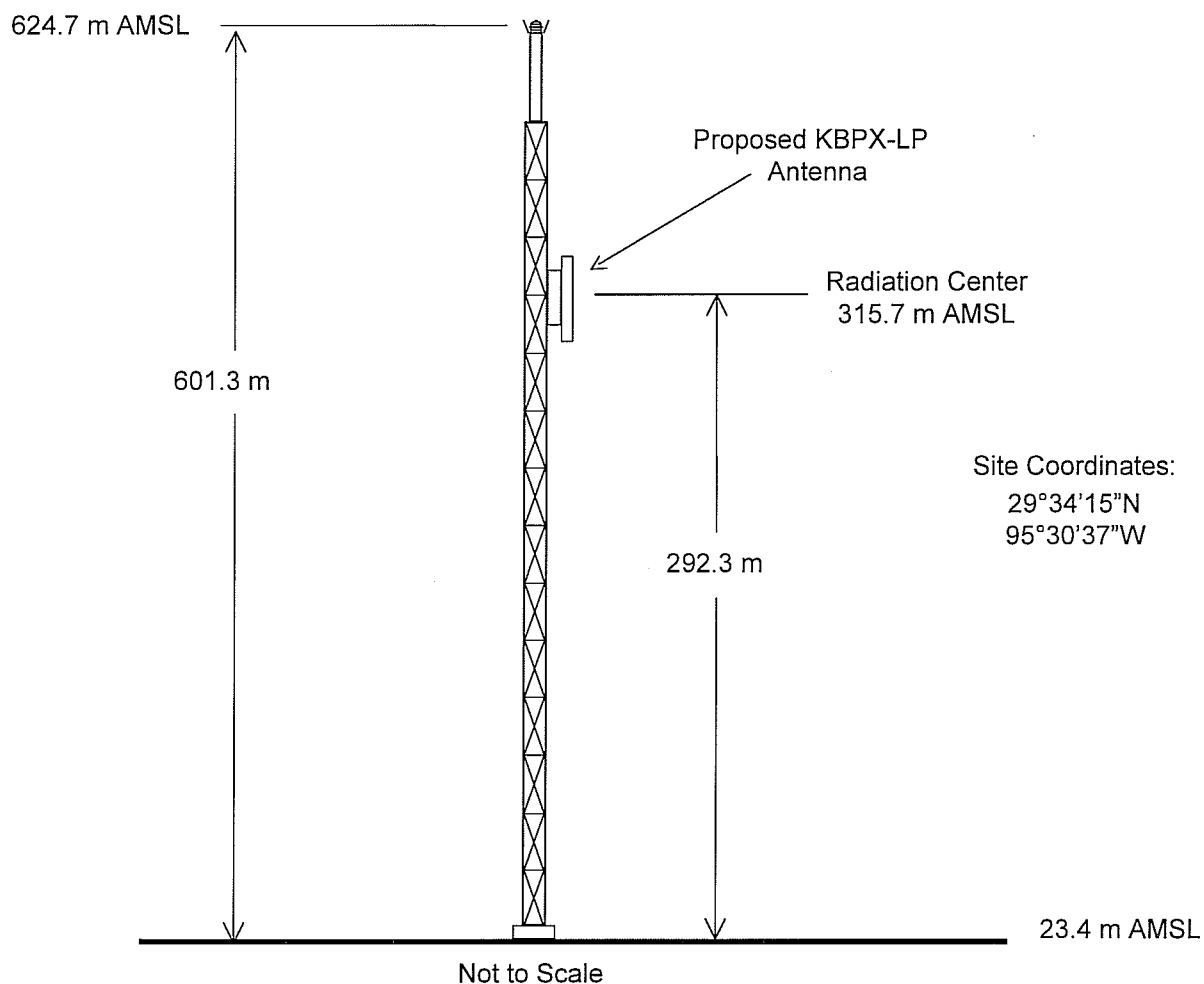
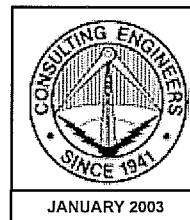
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January 7, 2003

Figure 1

FCC Tower ID: 1064696



## PROPOSED ANTENNA AND SUPPORTING STRUCTURE

STATION KBPX-LP  
HOUSTON, TEXAS  
CH 33(-) 90 KW-ND

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



Proposal Number

Revision

Date

07 Jan 2003

Call Letters

KPBX-LP

Channel

33

Location

Houston, TX

Customer

Paxson

Antenna Type

TLP-24A

### ELEVATION PATTERN

RMS Gain at Main Lobe

22.5 (13.52 dB)

Beam Tilt

1.35 Degrees

RMS Gain at Horizontal

5.2 (7.16 dB)

Frequency

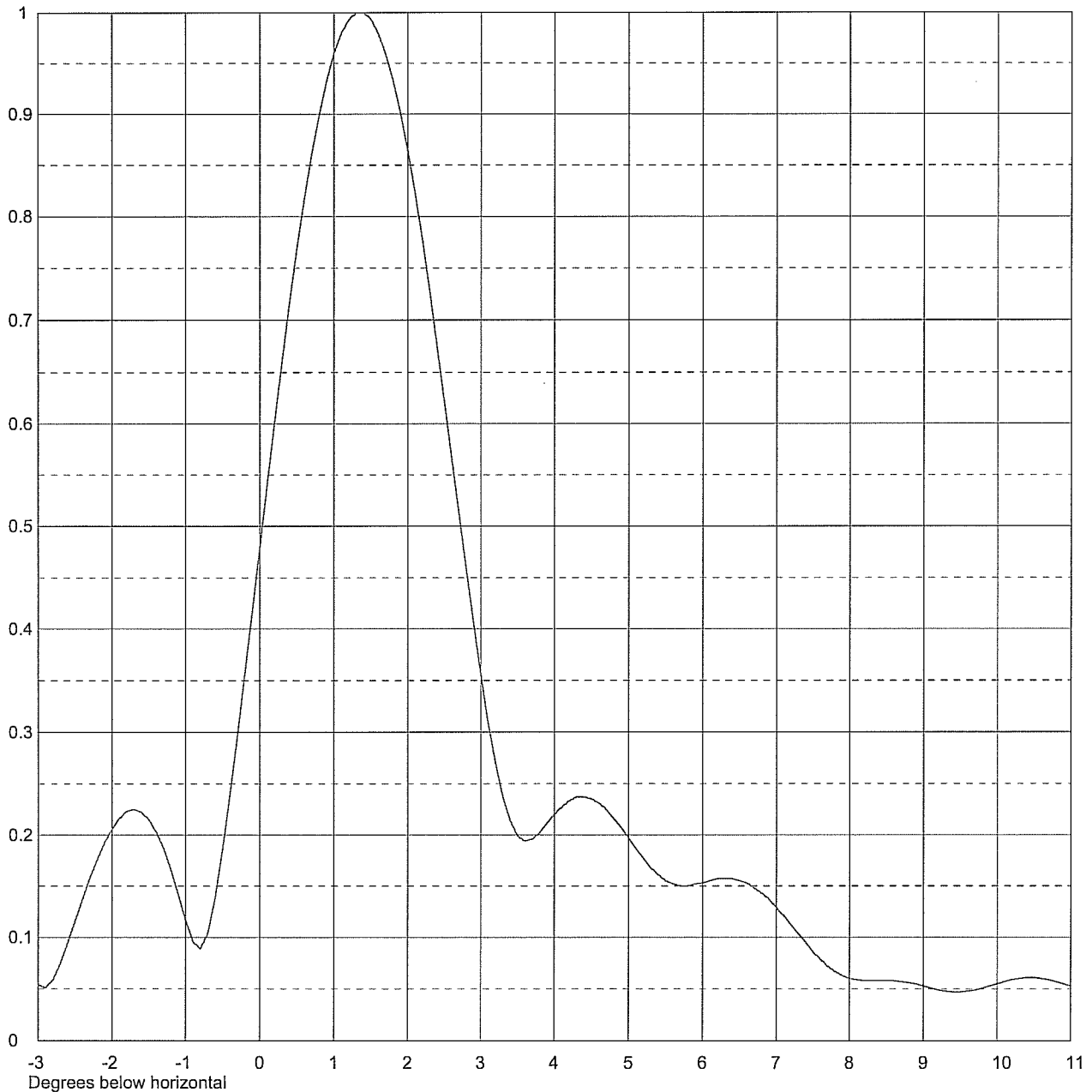
587.00 MHz

Calculated / Measured

Calculated

Drawing #

24L225135



Remarks:





Proposal Number

Revision

Date

07 Jan 2003

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KPBX-LP

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33

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**22.5 (13.52 dB)**

Beam Tilt

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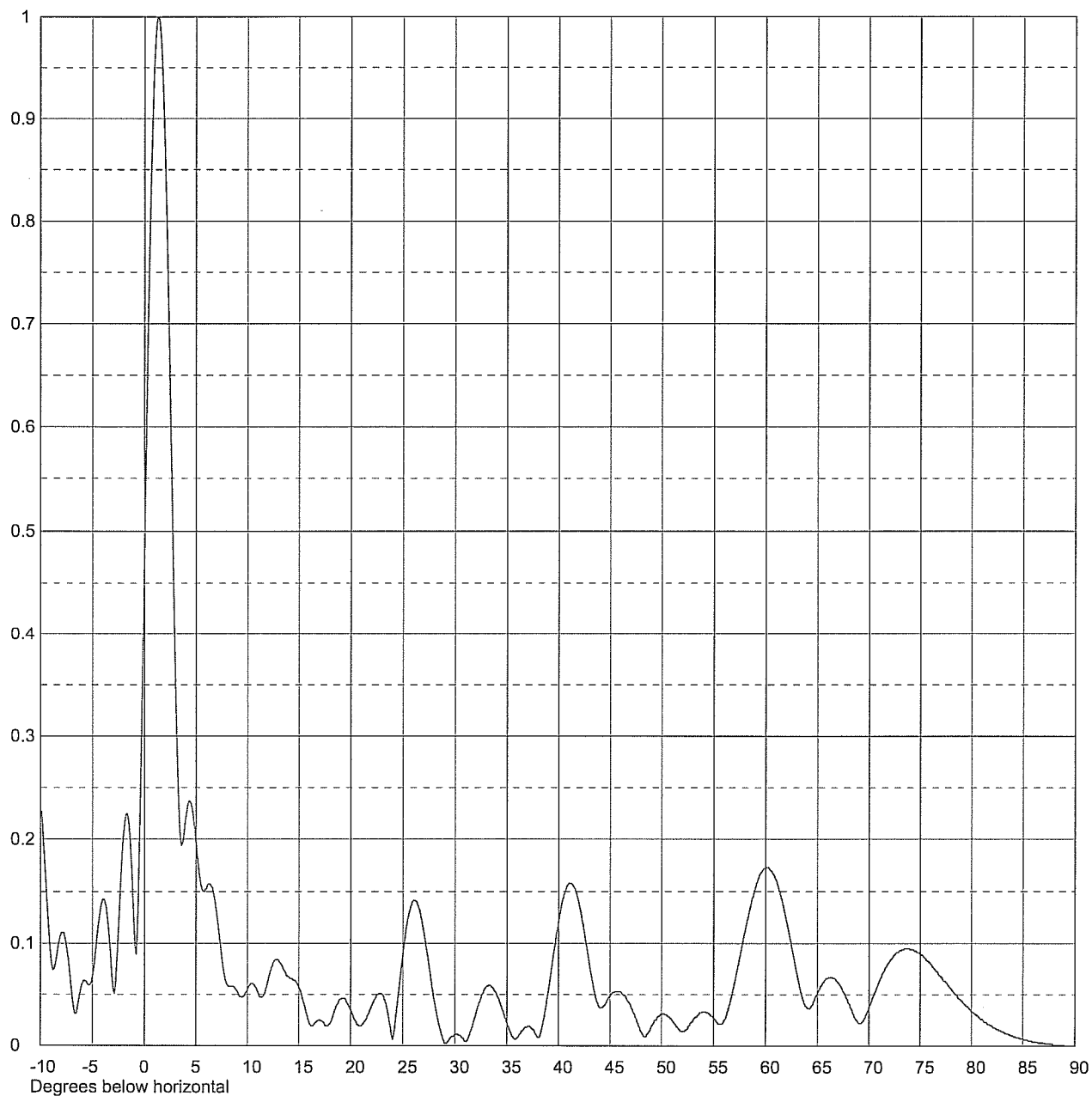
Frequency

**587.00 MHz**

Calculated / Measured

**Calculated**

Drawing #

**24L225135-90**

Remarks:

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Technical Specifications

Channel	33
Frequency band	584-590 MHz
Carrier offset	minus (-)
Proposed Site Coordinates (NAD 27)	29° 34' 15" North Latitude 95° 30' 37" West Longitude
Site Elevation above mean sea level	23.4 m
Average elevation above mean sea level of 8 equally spaced radials, 3-16 kilometers	19.1 m
Overall height of antenna structure (#1064696)	
Above ground	601.3 m
Above mean sea level	624.7 m
Height of antenna radiation center	
Above ground	292.3 m
Above mean sea level	315.7 m
Above average terrain	297 m
Transmitter rated power output (peak)	20 kW
Transmission line efficiency (2.04 dB loss) 335.3 m (1100 ft) of Andrew HJ8-50B 3" Helix	36.3%
Antenna	Dielectric TLP-24A
Polarization	Horizontal
Peak Power Gain (13.52 dB)	22.5
Power Gain at radio horizon (11.3 dB)	13.5
Beam Tilt	1.35°
Pattern	Non-directional

Proposed Operation

Transmitter output power (peak, 12.64 dBk)	18.4 kW
Transmission line loss (4.4 dB)	11.7 kW
Antenna input power (8.24 dBk)	6.7 kW
ERP at 1.35 degrees depression angle (21.76dBk)	150 kW
ERP at radio horizon (19.54 dBk)	90 kW