

TECHNICAL EXHIBIT
APPLICATION FOR MODIFICATION OF
NTSC CONSTRUCTION PERMIT
FCC FILE NO. BPCT-19960919KP
STATION KBCA
FCC FACILITY ID 83715
BORGER, TEXAS
CH 31 5000 KW (MAX-DA) 373 M

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of an application for modification of the construction permit for TV station KBCA currently at Elk City, Oklahoma (FCC File No. BPCT-19960919KP, Facility ID 83715). The current authorization is for a facility on NTSC channel 31 at Elk City, Oklahoma with a nondirectional antenna visual maximum effective radiated power (ERP) of 5000 kilowatts (37 dBk) and a antenna radiation center height above average terrain (HAAT) of 217 meters.

Proposed Facilities

As a result of the Report and Order in MM Docket NO. 01-134 (RM-10137, adopted September 5, 2001, released September 14, 2001), the KBCA authorization was modified to specify operation on channel 31 at Borger, Texas and KBCA was ordered to file a minor change application specifying the new facility. Therefore, by means of this instant modification application, it is proposed to change transmitter site and operate on channel 31 at Borger, Texas with a directional antenna (DA) maximum visual ERP of 5000 kW and an HAAT of 373 meters. No other changes are proposed. An existing tower will be utilized for the proposed operation (antenna structure registration number 1044248).

The horizontal plane relative field pattern for the proposed PSI model PSI32AW "wide cardioid" DA system is attached as Figure 1.

Figure 2 is a map showing the predicted coverage contours. The map provides the City Grade (80 dBu), Grade A (74 dBu) and Grade B (64 dBu) contours. The Borger city limits were derived from information contained in the 2000 U.S. Census for Borger. As indicated, the City Grade contour encompasses 100 percent of Borger.

The distances to predicted coverage contours were determined in accordance with the provisions of Section 73.684 and Figure 9 of Section 73.699 except that, pursuant to current FCC practice, no consideration was given to terrain roughness correction factors. The average elevations from 3.2 to 16.1 kilometers from the transmitter site, were obtained from the NGDC 30-second terrain database and were used for determining the distances to coverage contours.

NTSC/DTV Allocation Studies

Figure 3 is a copy of the television allocation study showing pertinent analog stations and allotments. The proposed analog channel 31 transmitter site meets all of the Commission's minimum separation requirements to analog (NTSC) allotments.

DTV interference studies were also conducted based on the procedures outlined in the FCC's OET-69 bulletin.¹ The studies indicate that the proposed operation complies with the FCC's DTV interference criteria to all known licensed, authorized or proposed DTV assignments based on OET Bulletin No. 69.

Studies also indicate the proposed NTSC channel 31 operation will not adversely impact any co-channel or pertinent adjacent channel Class A LPTV stations.

Nearby Broadcast Facilities

There are no known AM stations located within 3.2 km (2 miles) of the proposed site. Figure 4 provides a tabulation of all known FM and TV stations located within 16 km (10 miles) of the proposed site. Although no adverse electromagnetic impact is expected, the applicant recognizes its responsibility to correct problems, which are a result of its proposed operation.

¹ The du Treil, 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 2 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 proposed site is located approximately 1521 kilometers from the closest point of the Canadian border. The proposed site is located approximately 582 kilometers from the closest point of the Mexican border. The closest FCC monitoring station is at Grand Island, NE located 691 kilometers to the north-northeast. The closest point of the National Radio Quiet Zone (VA/WV) is more than 1921 kilometers to the east-northeast. The closest point of the Table Mountain Radio Quiet Zone (CO) is more than 611 kilometers to the northwest. The closest radio astronomy site operating on TV channel 37 is at Los Alamos, NM located more than 401 kilometers to the west. These separations are sufficient to not be a concern for coordination purposes.

Environmental Protection Act

The proposed channel 31 NTSC 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 proposed NTSC antenna is located 366 meters above ground level. The maximum ERP is 5000 kW and 10% aural power is presumed. Using a "typical" relative field value of 0.1 for downward radiation (angles below 60 degrees)², the calculated power density at a point 2 meters above ground level is 0.0063W/cm². This is 1.64% of the FCC's recommended limit of 0.38 mW/cm² for channel 31 for an "uncontrolled" environment. Therefore, based on the new responsibility threshold of 5%, the proposal will comply with the new 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 with the other stations 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

² See page 14 of OST Bulletin No. 65, "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation" (October 1985).

exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time or scheduling work when the stations are at reduced power or shut down.

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

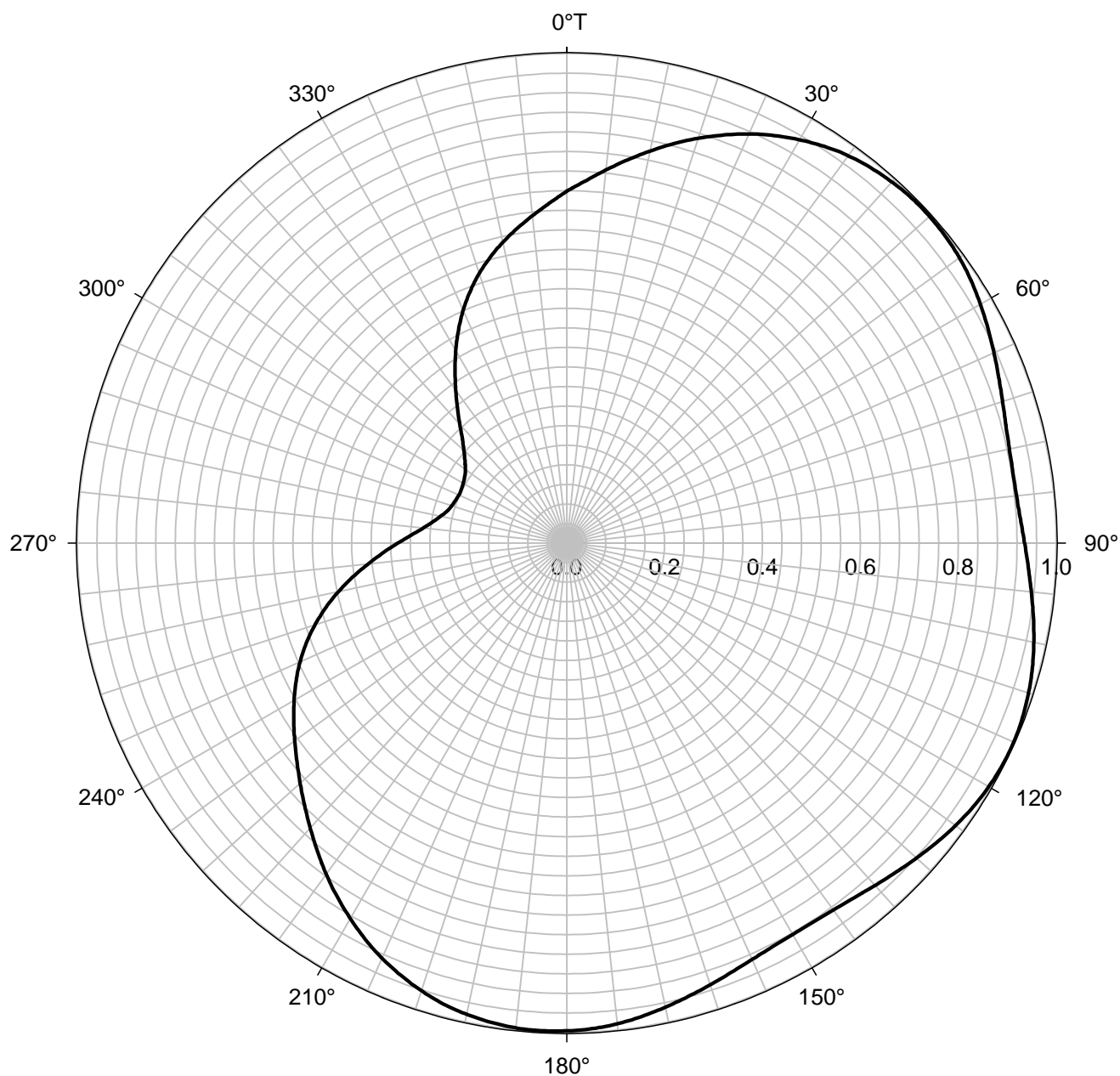
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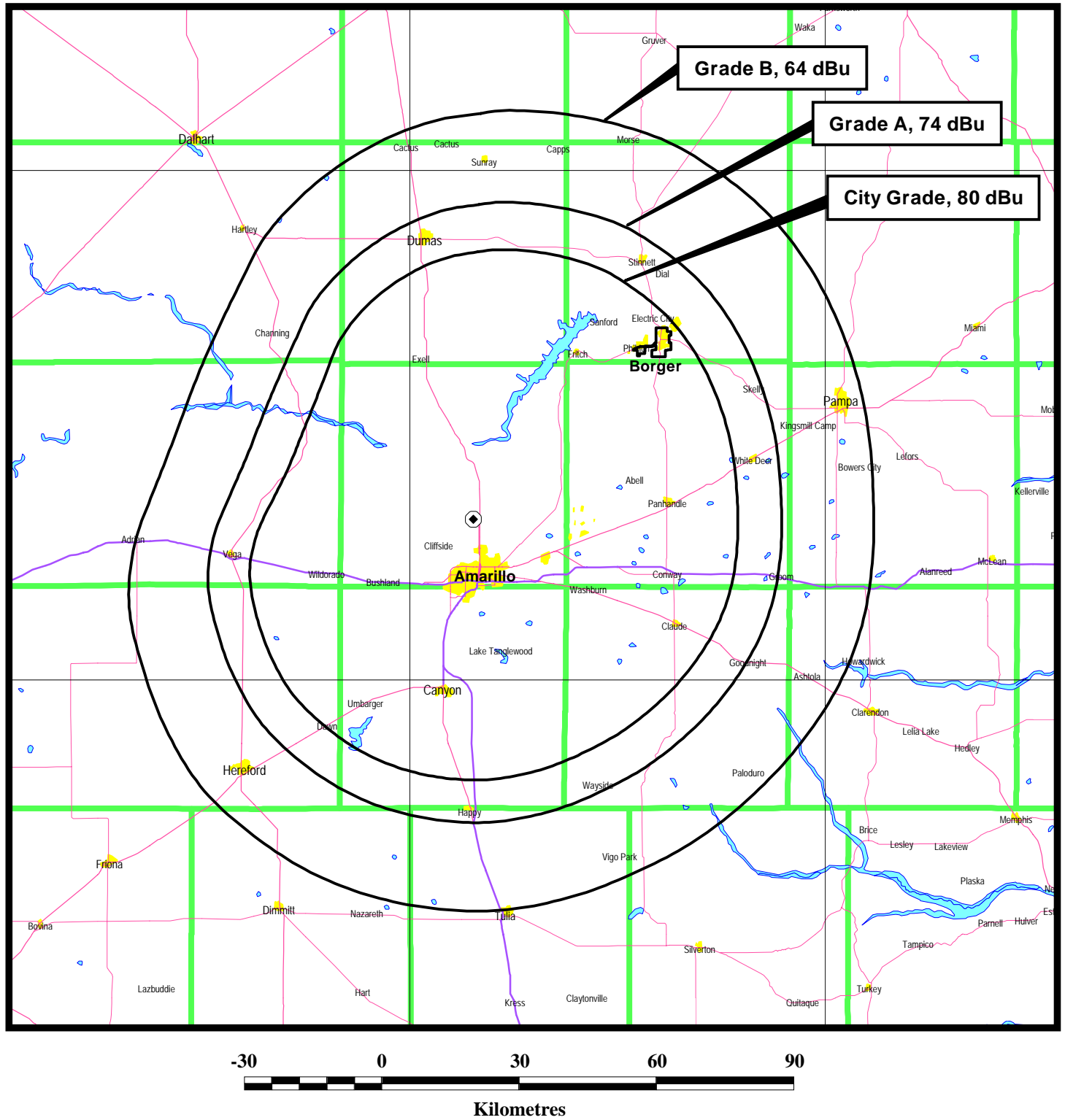
Figure 1

PSI MODEL PSI32AW DIRECTIONAL ANTENNA



HORIZONTAL PLANE RELATIVE FIELD PATTERN
STATION KBCA
BORGER, TEXAS
NTSC CHANNEL 31 5000 KW (MAX-DA) 373 M

Figure 2



PREDICTED COVERAGE CONTOURS
STATION KBCA
BORGER, TEXAS
NTSC CH 31 5000 KW (MAX-DA) 373 M

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

NTSC Separation Study

Job Title : Proposed KBCA, Ch. 31, Borger, TX Separation Buffer 32 km
 Zone : 2 FCC TV DB Date : 10/23/01
 Channel 31 (572-578 MHz) Coordinates : 35-18-53 101-50-47

Call	City		Channel	ERP(kW)	Latitude	Bear.	Dist.	Req.
Status	St	FCC File No.	Zone	HAAT(m)	Longitude	True	(km)	(km)
	GUYMON		16(o)	.000	36-40-12	12.2	153.98	119.9
ALLOC	OK	-	II	0	101-28-47		34.08	CLEAR
KBCA	BORGER		31(o)	5000	35-41-56	63.4	96.46	
ADD	TX BPRM	-20000906	II	600	100-53-34			
	BORGER		31(o)	.000	35-41-56	63.4	96.46	
ALLOC	TX	-	II	0	100-53-34			
KBCA	ELK CITY		31(o)	8.5	35-25-17	86.1	212.64	
APP	OK BMPCT	-20001108	II	191	99-30-37			
KBCA	ELK CITY		31(o)	5000	35-24-22	86.6	213.66	
CP	OK BPCT	-19960919	II	217	99-29-54			

** End of TV Separation Study for Channel 31 **

du Treil, Lundin, and Rackley**Figure 4, Sheet 1 of 2****Proposed KBCA****Coordinates: 351853 1015047 Frequency Range: -****Range: 16**

Date: 10/26/01

CDBS FM Inquiry List

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Rec Type	Fac Id	Call	Status	Chan	Svc Class	Class	City	St	DA	Latitude	Longitude	ERP (kW)	HAAT (m)	RCAMSL (m)	Bear	Dist. (km)
C	72168	KJRT	LIC	202	FM	C3	AMARILLO	TX	N	35-11-57	101-48-43	20	88.0	1178.0	166.3	13.2
C	72167	DK203B	LIC	203	FX	D	AMARILLO	TX		35-20-33	101-49-21	0.085	295.0	1330.0	35.1	3.8
C	39889	KXLV	LIC	206	FM	A	AMARILLO	TX	N	35-15-39	101-52-53	3	100.0	1175.0	207.9	6.8
C	39889	KXLV	CP	206	FM	C3	AMARILLO	TX	N	35-15-39	101-52-52	13.6	122.0	1196.0	207.7	6.8
C	1234	KACV-F	LIC	210	FM	C	AMARILLO	TX		35-20-33	101-49-21	100	352.0	1384.0	35.1	3.8
C	1612	KAVW	LIC	214	FM	A	AMARILLO	TX	N	35-11-57	101-48-43	1	65.0	1155.0	166.3	13.2
C	5138	KXRI	LIC	220	FM	C3	AMARILLO	TX	N	35-14-31	101-48-43	4	140.0	1217.0	158.9	8.7
C	41567	KQIZ-F	LIC	226	FM	C1	AMARILLO	TX		35-17-33	101-50-48	100	213.0	1269.0	360.0	2.5
C	31463	KMXJ-F	LIC	231	FM	C	AMARILLO	TX	N	35-20-33	101-49-21	100	330.0	1364.0	35.1	3.8
C	85706	K235AL	LIC	235	FX	D	AMARILLO	TX	N	35-12-26	101-50-18	0.062	157.0	1248.0	176.5	12.0
C	9306	KMML-F	LIC	245	FM	C1	AMARILLO	TX	N	35-17-33	101-50-48	100	187.0	1242.0	360.0	2.5
C	63161	KGNC-F	LIC	250	FM	C	AMARILLO	TX		35-18-52	101-50-47	98	391.0	1440.0	0.0	0.0
C	39781	KPQZ	LIC	265	FM	C1	AMARILLO	TX	N	35-18-04	101-51-21	100	180.0	1230.0	209.5	1.7
C	41433	KATP	LIC	270	FM	C1	AMARILLO	TX	N	35-20-33	101-49-21	100	285.0	1318.0	35.1	3.8
C	39892	KRGN	APP	275	FM	C1	AMARILLO	TX	N	35-15-39	101-52-52	100	86.0	1162.0	207.7	6.8
C	39892	KRGN	LIC	276	FM	A	AMARILLO	TX	N	35-16-04	101-53-06	3	91.0	1153.0	213.9	6.3
C	33273	KAEZ	LIC	289	FM	C2	AMARILLO	TX	N	35-17-33	101-50-48	43	160.0	1215.0	360.0	2.5

du Treil, Lundin, and Rackley**Figure 4, Sheet 2 of 2****Proposed KBCA****Coordinates: 351853 1015047 Channel Range: 2-69****Range: 16**

Date: 10/26/01

CDBS Tv Inquiry List

Page: 1

Rec Type	Facility Id	Call	Status	Chan	Svc Class	City	St	DA	Latitude	Longitude	ERP (kW)	HAAT (m)	RCAMSL (m)	Bearing	Dist. (km)
C	8523	KAMR-T	LIC	4	TV	AMARILLO	TX		35-18-52	101-50-47	100.000	433	1482	0	0.03
C	51466	KFDA-T	LIC	10	TV	AMARILLO	TX		35-17-34	101-50-42	316.000	466	1525	177.0	2.44
C	1236	KACV-T	LIC	2	TV	AMARILLO	TX	N	35-20-33	101-49-21	100.000	401	1433	35.05	3.77
C	33722	KCIT	LIC	14	TV	AMARILLO	TX	N	35-20-33	101-49-21	1290.00	464	1492	35.05	3.77
C	40446	KVII-T	LIC	7	TV	AMARILLO	TX		35-22-29	101-52-58	316.000	518	1525	333.6	7.43
C	40446	KVII-T	CP	7	TV	AMARILLO	TX	N	35-22-30	101-52-56	316.000	519	1525	334.1	7.44