

TECHNICAL EXHIBIT
APPLICATION FOR MINOR MODIFICATION
OF CONSTRUCTION PERMIT
STATION KOLD-DT (FACILITY ID 48663)
TUCSON, ARIZONA

SEPTEMBER 17, 2001

CH 32 750 KW (MAX-DA) 1123 M

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Technical Narrative

This Technical Exhibit supports a minor modification of construction permit for digital television (DTV) station KOLD-DT on channel 32 at Tucson, Arizona. Station KOLD-DT is authorized (CP) to operate with a non-directional antenna effective radiated power (ERP) of 762 kW and an antenna height above average terrain (HAAT) of 602 meters (BPCDT-19991025AEQ).

Proposed Facilities

This minor modification proposes to change transmitter site, increase ERP, increase HAAT and change to a directional antenna. KOLD-DT proposed to operate at a site located 42 kilometers east-northeast of the current CP site (coordinates: 32-24-56 N, 110-42-50 W) with a directional antenna maximum ERP of 750 kW and antenna HAAT of 1123 meters. The FCC antenna structure registration number is 1007178.

Due to the excessive HAAT (1123 meters), the proposed ERP was determined based on that needed to provide the same geographic coverage as the largest station in the market, namely the DTV allotment for station KUAT-TV (Ch 30, Tucson). The allotted KUAT-TV DTV noise-limited contour encompasses a total area of 53,450 square kilometers.

The proposed KOLD-DT 750 kW-DA noise-limited contour encompasses a total area of 51,670 square kilometers, or about 4% less than the KUAT-TV DTV coverage area. Therefore, the proposal complies with Section 73.622(f)(5) concerning maximum allowable ERP and HAAT.

The proposed transmitter site is more than 1,800 kilometers from the closest point of the Canadian border. The site is approximately 122 kilometers from the closest point of the Mexican border. It is believed that the proposal meets the minimum separation requirements to Mexican stations and allotments.

The closest FCC monitoring station is at Douglas, Arizona, approximately 143 kilometers to the southeast. The closest point of the National Radio Quiet Zone (VA/WV) is more than 2,700 kilometers to the east-northeast. The closest point of the Table Mountain Radio Quiet Zone (CO) is more than 900 kilometers to the north-northeast. The closest radio astronomy site operating on TV channel 37 is at Kitt Peak, Arizona, approximately 99 kilometers to the southwest. These separations are sufficient to not be a concern for coordination purposes.

Nearby Broadcast Facilities

There are no known authorized full service AM stations within 5 kilometers (3.1 miles) of the proposed site. The following is a list of known authorized full service FM and TV stations within 16 kilometers (10 miles) of the proposed site.

<u>Station</u>	<u>Channel</u>	<u>Bearing</u>	<u>Distance</u>
KUAT-FM, Tucson, AZ	213C	254 deg.	0.1 km
KXCI, Tucson, AZ	217C2	248	0.2
KGMG, Oracle, AZ	292C2	292	7.4
KVOA, Tucson, AZ	4	90	0.03
KVOA-DT(CP), Tucson, AZ	23	90	0.03
KUAT-DT(CP) Tucson, AZ	30	241	0.1
KUAT-TV, Tucson, AZ	6	253	0.1

KXGR(CP), Green Valley, AZ	46	248	0.2
KGUN, Tucson, AZ	9	255	0.2

Although no adverse electromagnetic impact is expected, the applicant recognizes its responsibility to correct problems that result from its proposed operation.

Allocation Study

Interference calculations have been made using the procedures outlined in the FCC's OET-69 bulletin, using a 2 kilometer grid spacing. Below is the list of stations considered in the OET-69 analysis.

Stations Potentially Affected by KOLD-DT						
Chan	Call	City/State	Bear (°T)	Dist (km)	Status	App. Ref. No.
18	KTTU-TV	TUCSON AZ	244	42.1	LIC	BLCT-19850108LD
31	KSAZ-DT	PHOENIX AZ	309	162.1	PLN	DTVPLN-DTVP0765
31	KSAZ-DT	PHOENIX AZ	309	162.0	CP MOD	BMPCDT-19990526KF
32	KCFG	FLAGSTAFF AZ	346	293.1	APP	BPCDT-19991004ABK
32	KCFG-DT	FLAGSTAFF AZ	346	324.4	PLN	DTVPLN-DTVP0801
33	KTVW-TV	PHOENIX AZ	309	162.1	LIC	BLCT-19971110KF
40	KHRR	TUCSON AZ	244	42.1	LIC	BMLCT-20000927ABJ

From the above list of stations considered, the table below shows the calculated interference caused to each station.

Study Station			Baseline	Net Population Change/Interference
18	KTTU-TV	TUCSON AZ	734,170	2 (0.0%)
32	KCFG-DT	FLAGSTAFF AZ (APP)	63,330	-485 (less interference)
32	KCFG-DT	FLAGSTAFF AZ (PLN)	63,330	-158 (less interference)
33	KTVW-TV	PHOENIX AZ	2,212,260	-14,035 (less interference)

The proposed KOLD-DT operation does not cause excessive (greater than 2%, up to 10% total) calculated interference to any analog or DTV assignment and therefore complies with

the FCC's 2%/10% interference standard. Therefore, it is believed the proposal is in compliance with the FCC's rules.

Class A Consideration

The FCC's CDBS and its list of low power television (LPTV) assignments eligible for Class A status has been reviewed for potential impact. Interference calculations have been made using the procedures outlined in the FCC's OET-69 Bulletin. The proposed KOLD-DT operation does not cause any calculated interference to any current or potential Class A station. If necessary, a waiver of the FCC rules is requested based on use of the FCC's OET-69 procedures to demonstrate no interference to LPTV assignments requesting Class A status.

Radiofrequency Electromagnetic Field Exposure

The proposed KOLD-DT 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 antenna is located 53 meters above ground level. The maximum ERP is 750 kW. A relative field value of 0.163 was assumed for the antenna's downward radiation (see Figure 2C). The "worst case" calculated power density at the angle of 66 degrees downward and a point 2 meters (6.6 feet) above ground level is 0.2123 mW/cm². This is 55% of the FCC's recommended limit of 0.39 mW/cm² for channel 32 for an "uncontrolled" environment. If necessary, RF measurements will be taken to ensure the proposed DTV operation complies with the FCC's RFR limits.

Access to the transmitting site will be restricted and appropriately marked with warning signs. As this may be a multi-user site an agreement will control access. 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 KOLD-DT operation appears to be otherwise categorically excluded from environmental processing.

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

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September 17, 2001

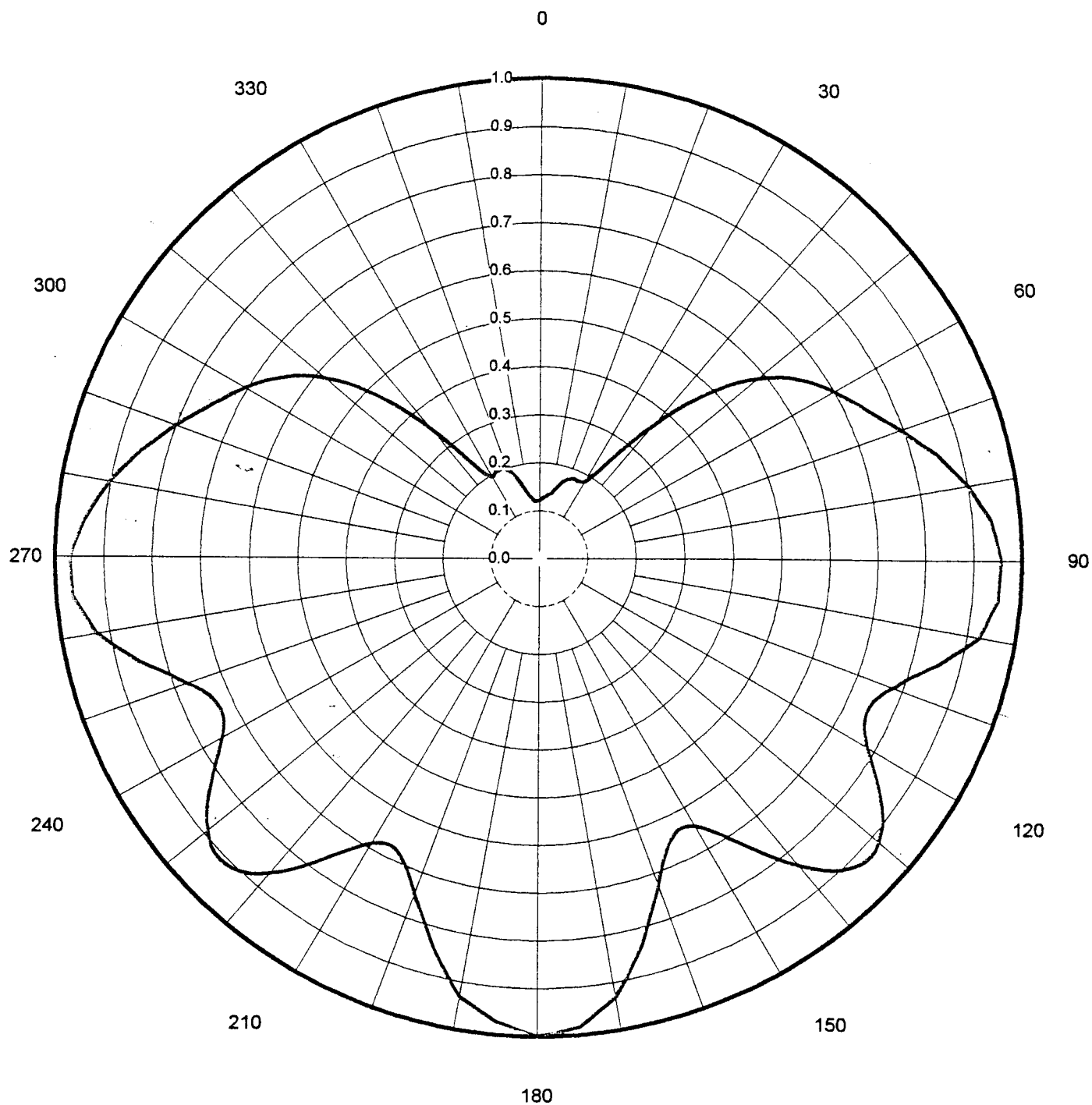
Dielectric

Proposal Number	DCA-9368	Revision:	1
Date			
Call Letters	KOLD	Channel	32
Location	Tucson, AZ		
Customer			
Antenna Type	TUA-C3-12/36H-1-R		

AZIMUTH PATTERN

Gain	1.93	(2.86 dB)
Calculated / Measured	Calculated	

Frequency	581.00 MHz
Drawing #	TUA-C3-32

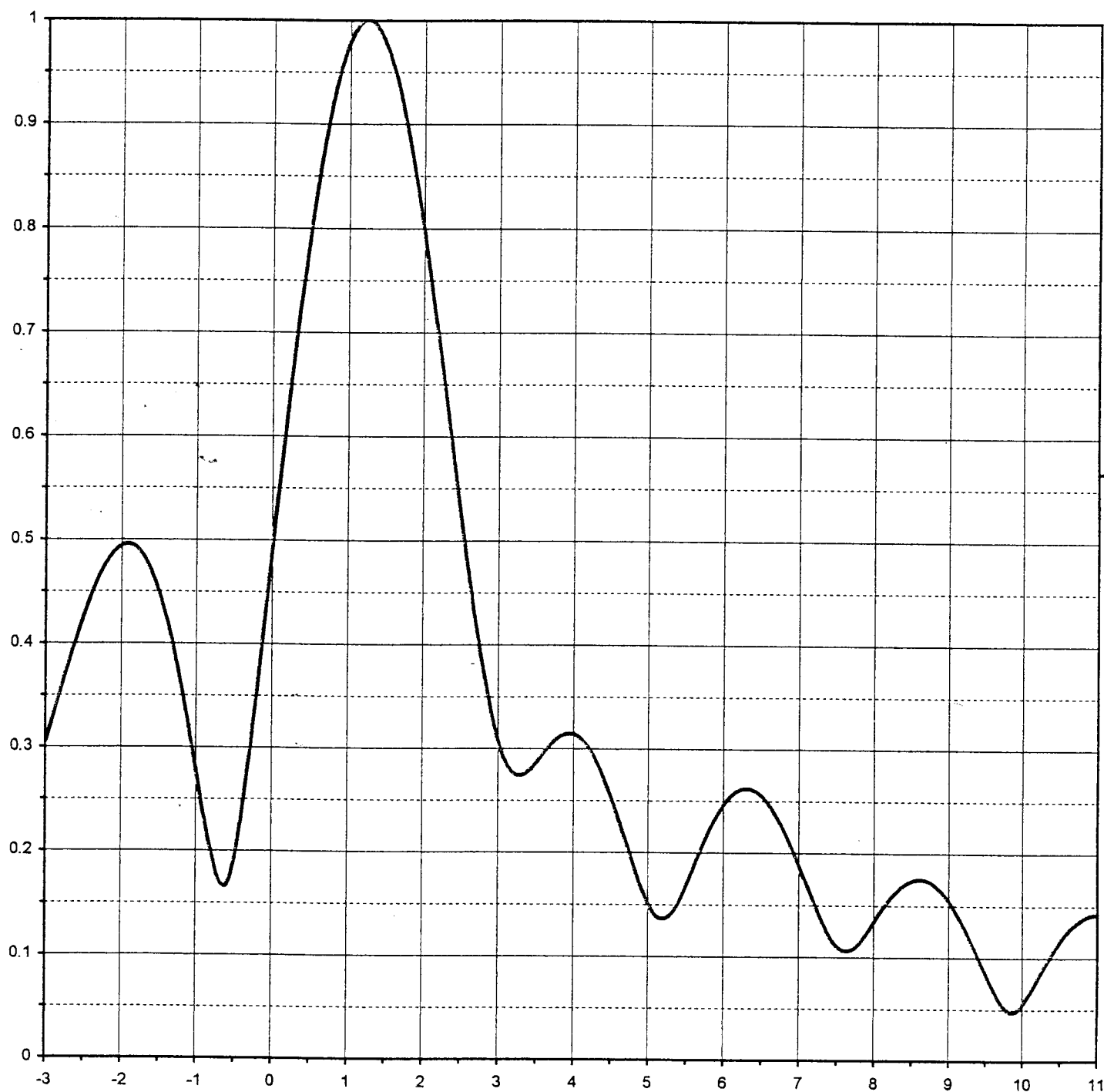


Dielectric

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Call Letters	KOLD	Channel	32
Location	Tucson, AZ		
Customer			
Antenna Type	TUA-C3-12/36H-1-R		

ELEVATION PATTERN

RMS Gain at Main Lobe	20.70 (13.16 dB)	Beam Tilt	1.20 deg
RMS Gain at Horizontal	5.00 (6.99 dB)	Frequency	581.00 MHz
Calculated / Measured	Calculated	Drawing #	12U207120-B32



Dielectric

Proposal Number	DCA-9368	Revision:	1
Date			
Call Letters	KOLD	Channel	32
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ELEVATION PATTERN

RMS Gain at Main Lobe	20.70 (13.16 dB)	Beam Tilt	1.20 deg
RMS Gain at Horizontal	5.00 (6.99 dB)	Frequency	581.00 MHz
Calculated / Measured	Calculated	Drawing #	12U207120-B32-90

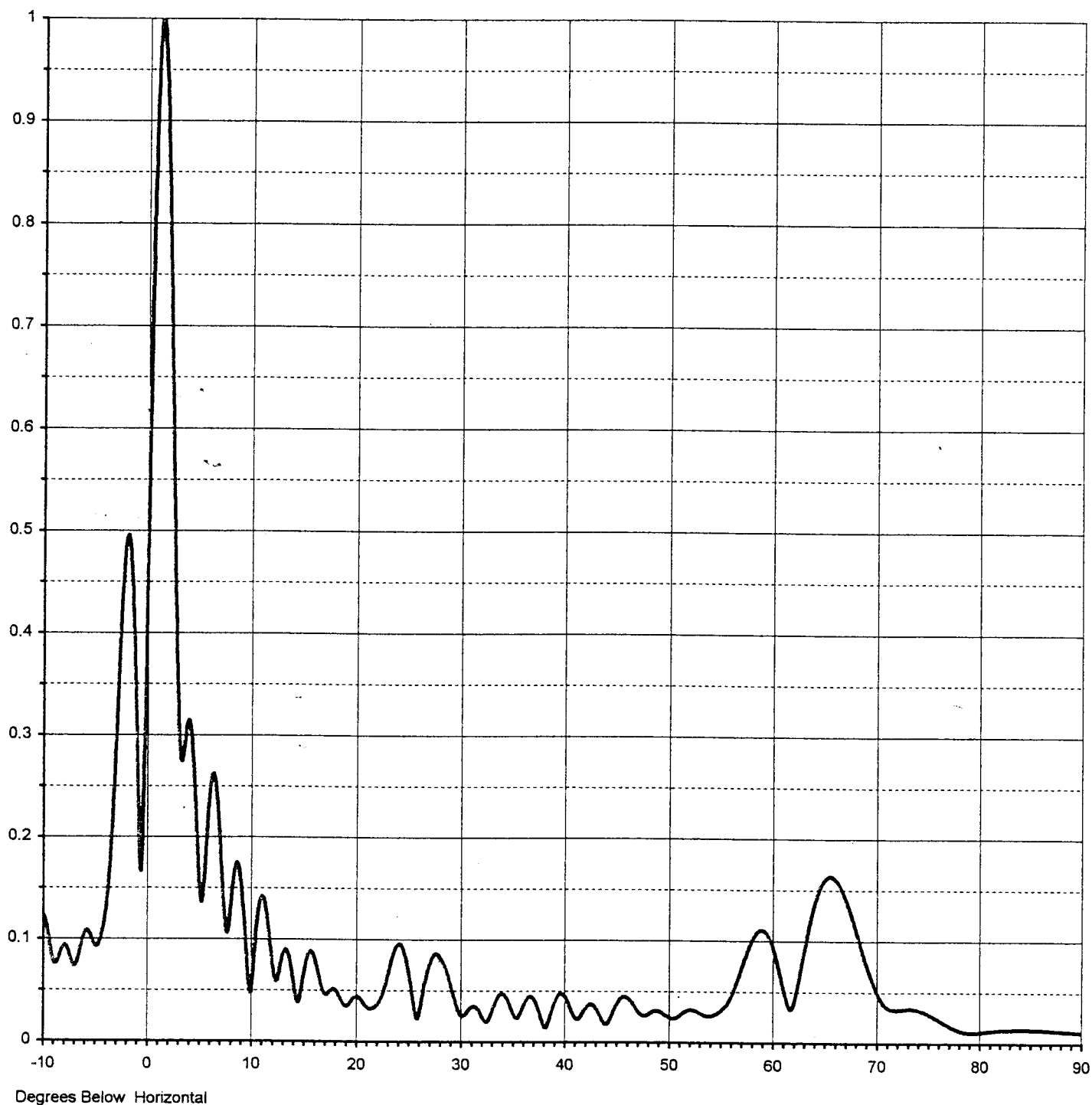
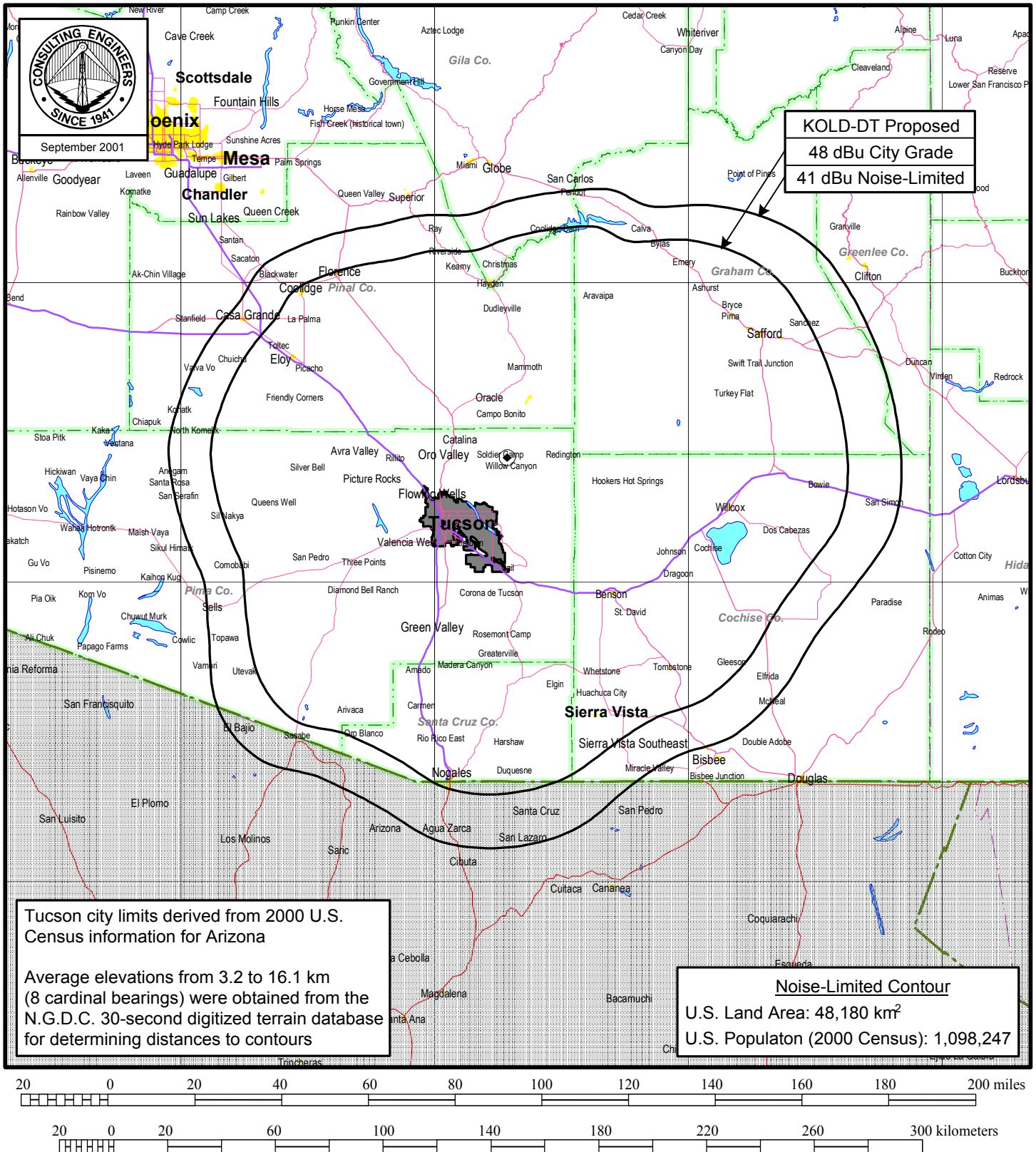


Figure 3



PREDICTED F(50,90) COVERAGE CONTOURS

STATION KOLD-DT

TUCSON, ARIZONA

CH 32 750 KW (MAX-DA) 1123 M

du Treil, Lundin & Rackley, Inc Sarasota, Florida