

TECHNICAL EXHIBIT
APPLICATION FOR MINOR CHANGE
MODIFICATION OF CONSTRUCTION PERMIT
STATION KMCC-DT (FACILITY ID 41237)
LAUGHLIN, NEVADA

OCTOBER 25, 2002

CH 32 41.6 KW (MAX-DA) -63 M

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Technical Narrative

This Technical Exhibit supports a minor change application to modify the construction permit (CP) of digital television (DTV) station KMCC-DT at Laughlin, Nevada. Station KMCC-DT is currently authorized to operate on channel 32 (BPCDT-20000907AGF, Facility ID 41237). Station KMCC-DT is authorized to use a Jampro JA/MS-HB-16 directional antenna (DA) system. The antenna pattern is “peanut” shaped with the major lobes oriented generally east and west. The maximum effective radiated power (ERP) is 51.3 kilowatts (kW). The antenna height above average terrain (HAAT) is -167 meters. The transmitter site coordinates are 35-09-32, 114-34-28 (NAD-27). The Federal Communications Commission (FCC) tower registration number for the supporting structure is 1219178.

Proposed DTV Facilities

This minor change application proposes to move transmitter site, increase the antenna height, change directional antenna pattern orientation, and decrease the maximum ERP. It is proposed to move the KMCC-DT transmitting facilities to a tower approximately 5.7 kilometers west of the current site. Although the existing structure has a FCC tower registration number (1035060), the Federal Aviation Administration (FAA) has been notified to correct site coordinates and ground elevation as determined by a local surveyor. The FCC tower registration will be updated upon receipt of the FAA’s determination. The site

coordinates for the existing structure are 35-10-08, 114-38-09 (NAD-27). Figure 1 is a sketch of the existing tower with the location of the proposed KMCC-DT antenna system. It is proposed to side-mount the Jampro JA/MS-HB-16 directional antenna system with the center of radiation 82.3 meters above ground level (AGL), 459.3 meters above mean sea level (AMSL). The proposed antenna HAAT will be -63 meters. The major lobes of the proposed antenna pattern will be oriented toward 0 (North) and 180 (South) degrees True. The antenna system incorporates no electrical beam tilt. The proposed maximum ERP is 41.6 kW. There is no proposed change in channel (32) or city of assignment (Laughlin, NV). The proposed KMCC digital (Ch.32) and analog (NTSC, Ch.34) operations will be combined into the Jampro directional antenna system.

The proposed KMCC-DT transmitter site is approximately 272 kilometers from the closest point of the Mexican border. It is believed the proposed KMCC-DT operation complies with the US/Mexico TV/DTV Agreement. If necessary, coordination of the proposed KMCC-DT operation with Mexico is requested.

The proposed KMCC-DT site is more than 1500 kilometers from the closest point of the Canadian border. The closest FCC monitoring station is at Douglas, Arizona, approximately 616 kilometers to the southeast. The closest point of the National Radio Quiet Zone (VA/WV) is more than 3000 kilometers to the east. The closest point of the Table Mountain Radio Quiet Zone (CO) is more than 900 kilometers to the northeast. The closest radio astronomy site operating on TV channel 37 is at Owens Valley, California, approximately 398 kilometers to the northwest. These separations are considered sufficient to not be a coordination concern.

The proposed KMCC-DT site is the site formerly used by AM station KLSQ on 870 kHz at Laughlin. The proposed KMCC-DT antenna will be mounted on the center tower of the 3 tower configuration. Station KSLQ has terminated its operation at this location. Therefore the proposed KMCC-DT operation will not have an electromagnetic impact on KLSQ. However, station KFLG(AM) on 1000 kHz at Bullhead City, Arizona operates on the east tower of the configuration. Station KFLG operates during daytime hours only with a power of 1 kW into a non-directional antenna system. Station KMCC-DT recognizes its responsibility to detune the tower on which it will mount so that the KFLG

operation will not be adversely affected and it will remain within license parameters. There are no other known AM stations within 3.2 kilometers (2 miles) of the proposed KMCC-DT site. Although no adverse electromagnetic interference is expected since the supporting structure exists and the addition of the proposed KMCC-DT antenna is not expected to have a significant impact, the applicant recognizes that it is responsible to remedy prohibited electromagnetic problems that its proposed operation may create.

Figure 3 is a map showing the predicted 48 dBu principal city contour and 41 dBu service contour for the proposed KMCC-DT operation. The city limits of Laughlin are identified. The estimated population within the proposed 41 dBu contour is 71,111 people.

Allocation Study

Figure 4 is a separation study for DTV channel 32 at the proposed KMCC-DT site. The separation study was used for allocation reference purposes only. Interference calculations have been made to pertinent analog (NTSC) full service assignments and DTV allotments and assignments using the procedures outlined in the FCC's OET-69 Bulletin. The proposed KMCC-DT operation complies with the FCC's interference standards.

Pertinent low power television (LPTV) stations that qualify for Class A consideration and are operating within the FCC's core band (ie, 2-51) have been examined. Interference calculations using the procedures outlined in the FCC's OET-69 Bulletin and a 1 kilometer grid have been made. The proposed KMCC-DT operation will not cause interference to any known Class A assignment. If necessary, a waiver of the FCC rules is respectfully requested based on use of the OET-69 procedures.

Radiofrequency Electromagnetic Field Exposure

The proposed KMCC-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 82.3 meters above ground level. The maximum DTV ERP is 41.6 kW. A relative field value of 0.2 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 0.0086 mW/cm^2 . This is less than 3% of the FCC's recommended limit of 0.39 mW/cm^2 for channel 32 for an "uncontrolled" environment. The calculated power density 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. As this is 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 KMCC-DT operation appears to be otherwise categorically excluded from environmental processing.

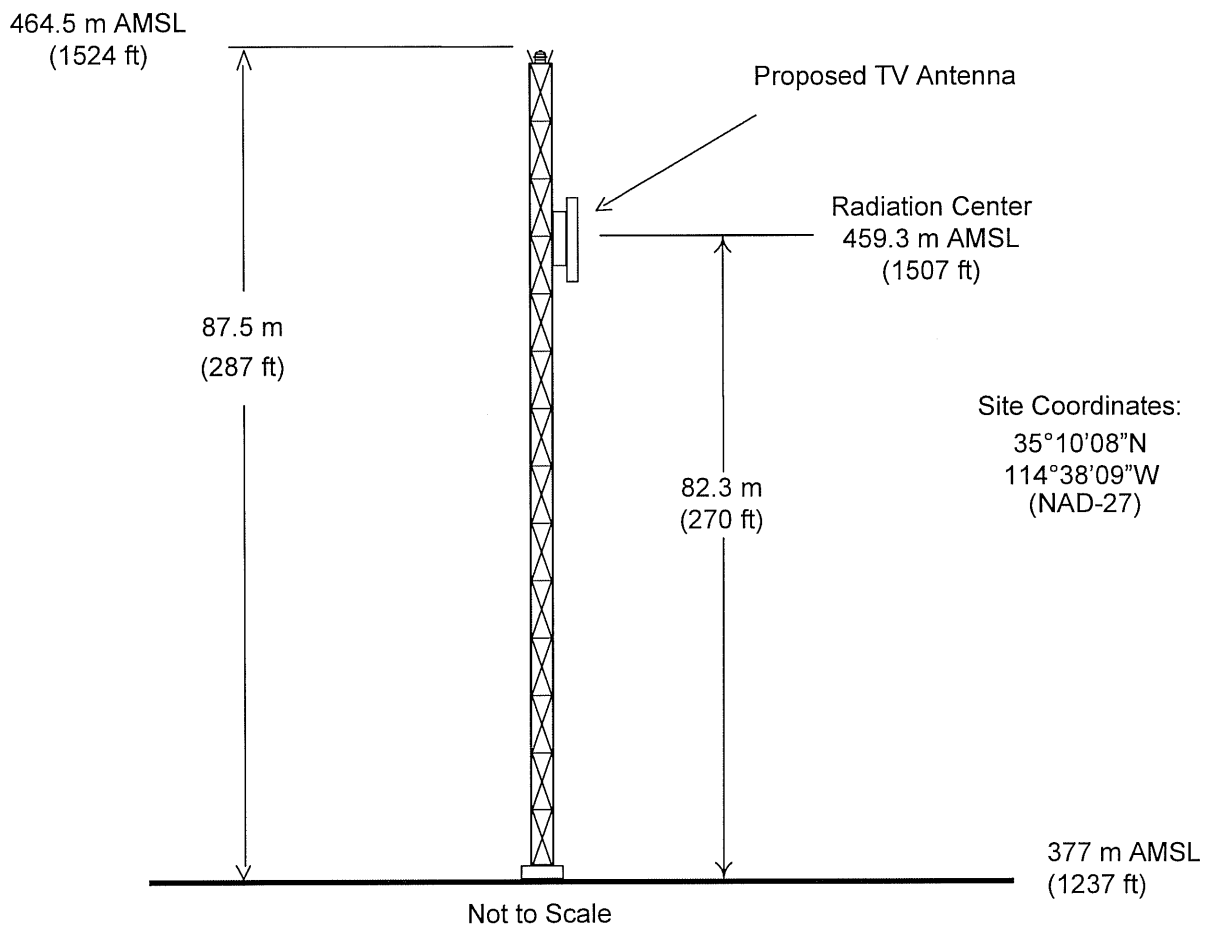
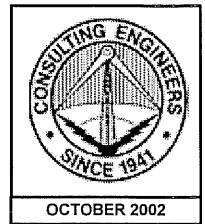
If there are questions concerning the technical portion of this application, please contact the office of the undersigned.

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October 25, 2002

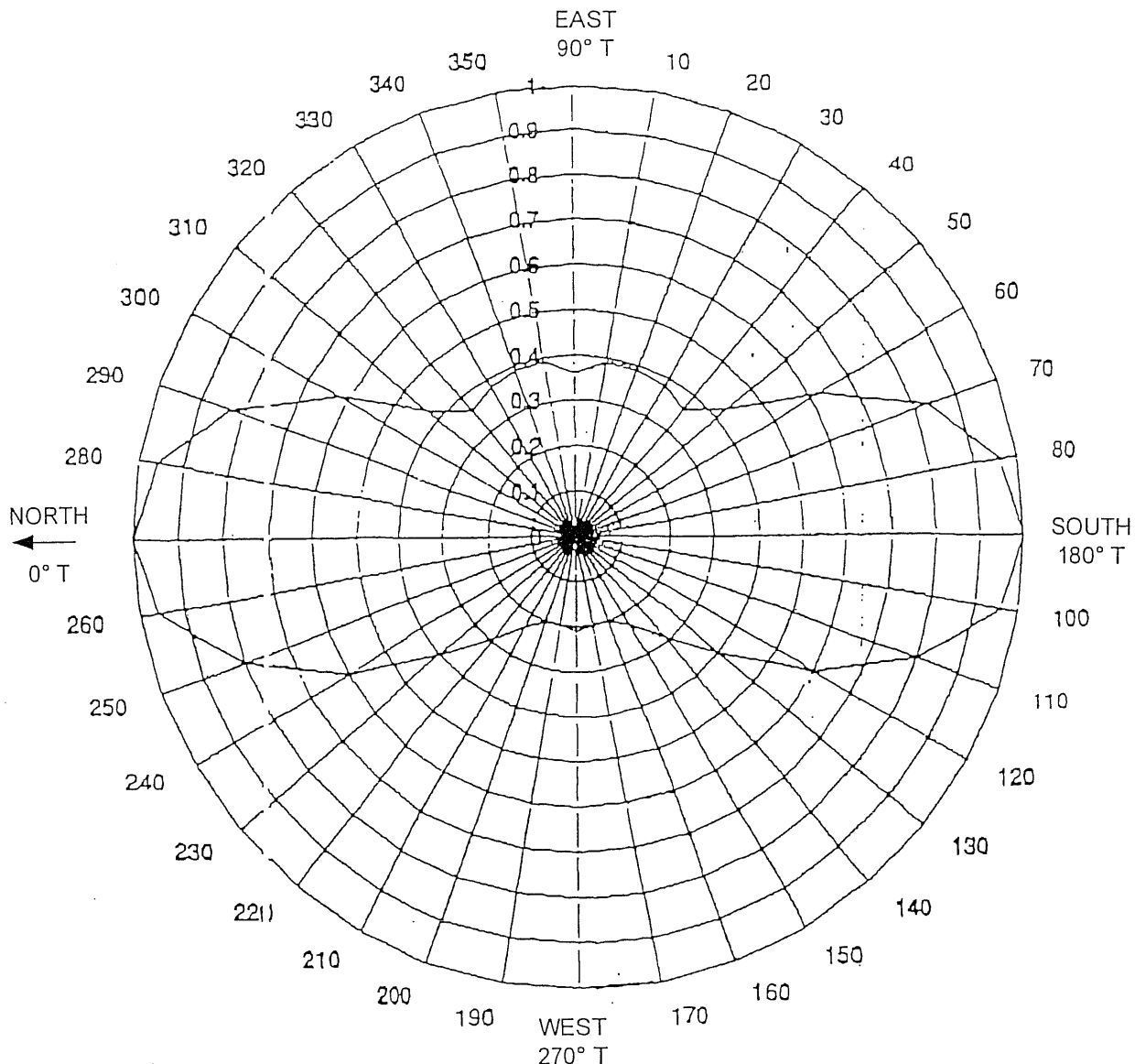
Figure 1



PROPOSED ANTENNA AND SUPPORTING STRUCTURE

STATION KMCC-DT
LAUGHLIN, NEVADA
CH 32 41.6 KW (MAX-DA) -63 M

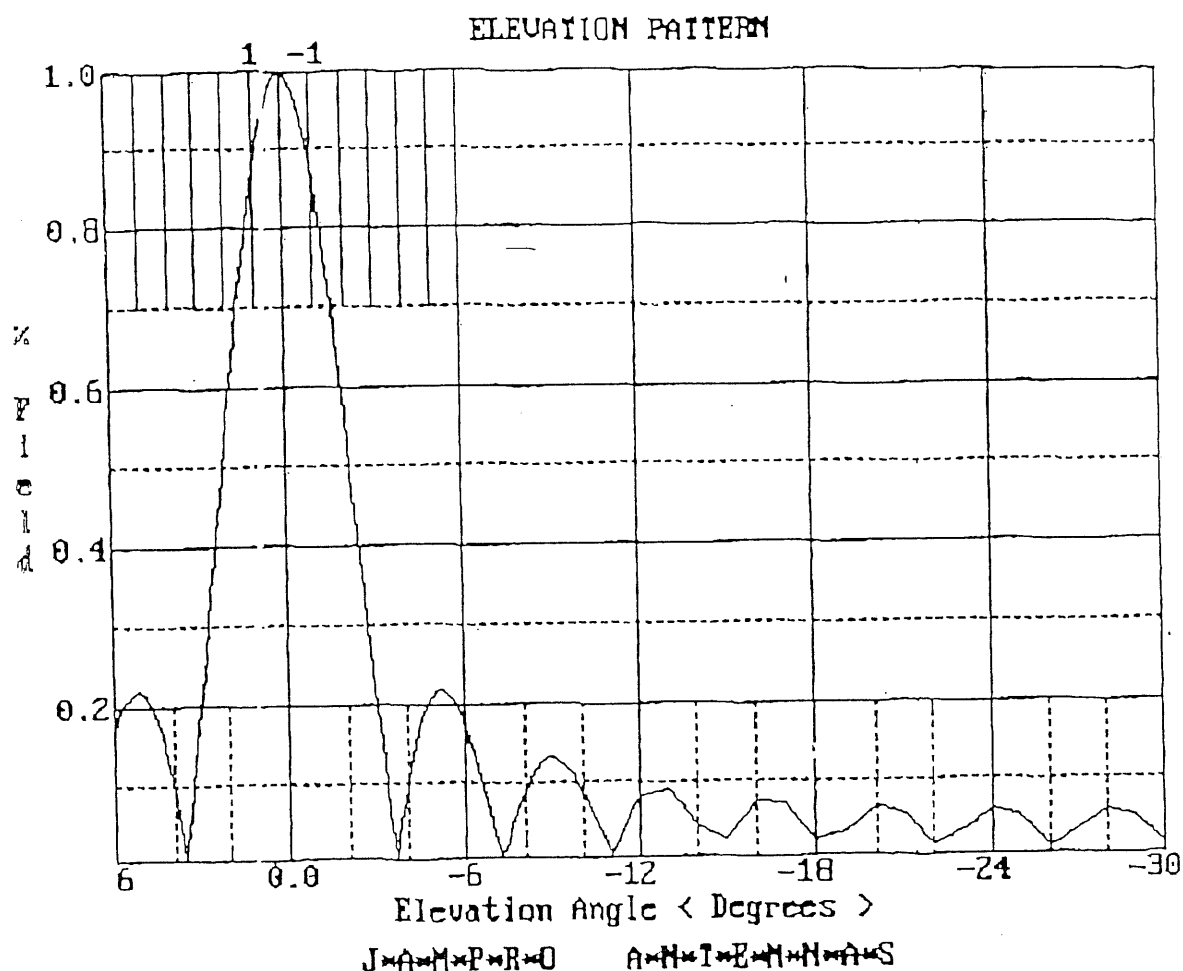
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



PATTERN #15 LONG PEANUT

DIRECTIVITY: 3.0

# OF BAYS	FCC FILE NUMBER	POWER GAIN	dBd	POWER INPUT
4	JA/LS-HB-4	14.10	11.5	1 kW
8	JA/LS-HB-8	28.20	14.5	1 kW
16	JA/LS-HB-16	56.40	17.5	1 kW
24	JA/LS-HB-24	79.50	19	1 kW



Customer: _____ date: _____

Frequency: _____ Type: SLOT-16

Beam tilt: 0 Null fill: 0 %

Notes: Elevation pattern plotted in relative field

Frequency: <MHz> 530.00

File Name: SLOT.ELU

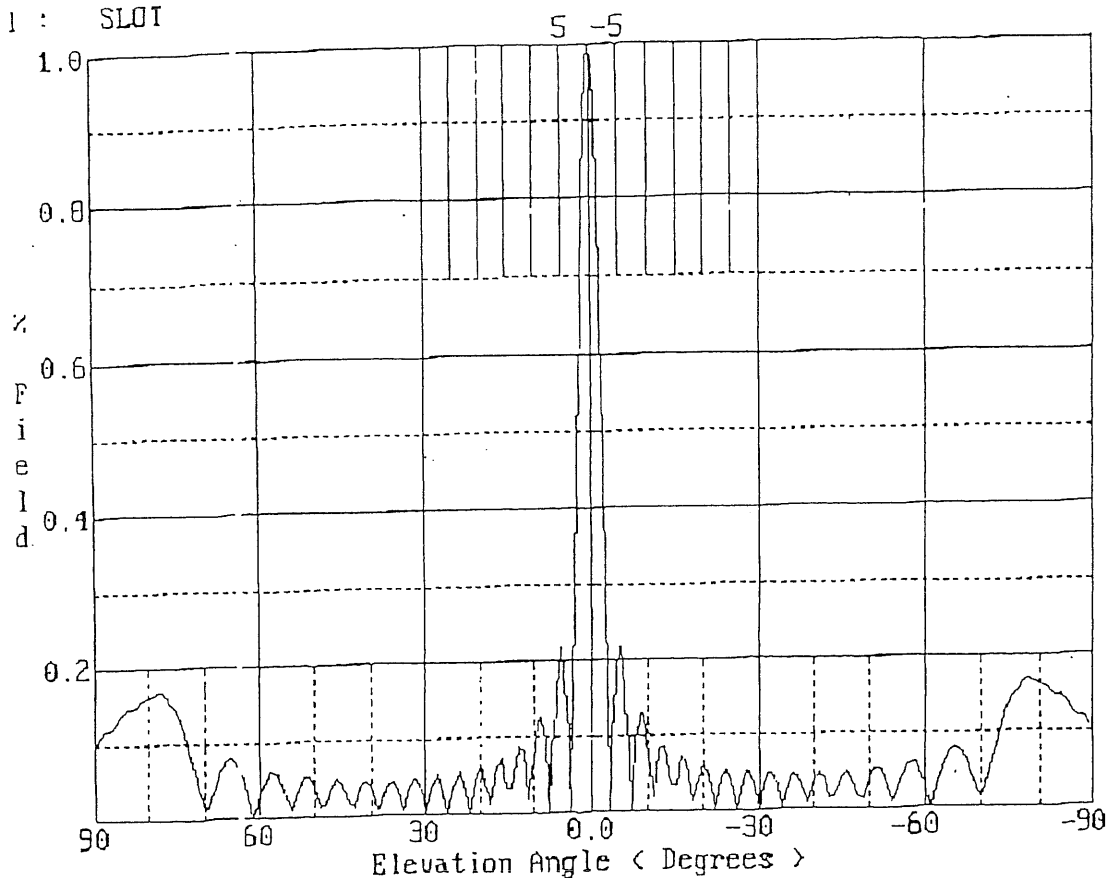
JAMPRO ANTENNAS INC.

Bays : 16

ELEVATION PATTERN

Spacing (Wavelength): 1.00

Model : SLOT



Customer: Laughlin, NV

Date: 1/21/00

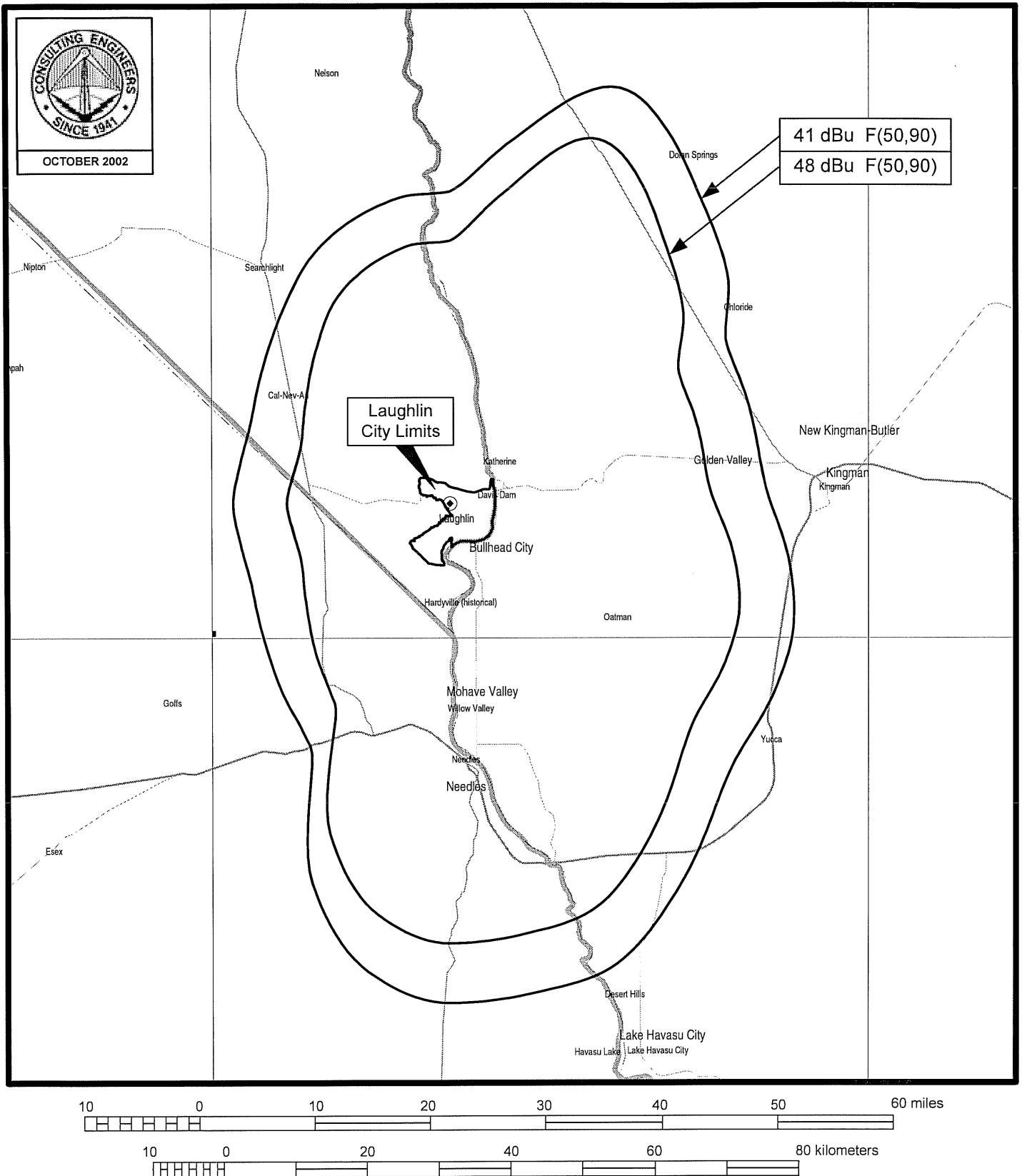
Frequency: CH. 34

Description: UHF Slot Antenna

Type: JA/MS-HB-16/34S

Notes: Beamtilt -0° and Null Fill 0%

Figure 3



PREDICTED COVERAGE CONTOURS

STATION KMCC-DT
LAUGHLIN, NEVADA

CH 32 41.6 KW (MAX-DA) -63 M

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

CDBS TV/DTV SEPARATION STUDY

Job Title: Proposed KMCC-DT, Laughlin, NV
Channel: 32 Type: DTV Zone: II

Separation Buffer: 65 km
Coordinates: 35-10-08 114-38-09

<u>Call</u> <u>FID</u>	<u>City</u> <u>St</u> <u>Status</u>	<u>File</u> <u>Num.</u>	<u>Chan.</u> <u>Zone</u>	<u>ERP-KW</u> <u>HAAT-m</u>	<u>DA</u> <u>ID</u>	<u>Latitude</u> <u>Longitude</u>	<u>Bearing</u> <u>(deg.)</u>	<u>Distance</u> <u>(km)</u>	<u>Required</u> <u>(km)</u>
KEEN-LP 10498	LAS VEGAS NV LIC C	BLTTL 19971009JA	17(+)	145.0	DA 16813	36-17-43 115-16-48	335.3	137.9	Class A Clear
K65FI 56172	BULLHEAD AZ CP C	CI BPTTL 20001212AB	25(+)	1.2	DA 20753	35-14-48 114-44-32	311.9	13.0	Class A Clear using OET-69
K25AL 36317	LAKE HAVASU AZ LIC C	BLTTL 19850927IA	25(N)	1.28	DA 16237	34-29-28 114-19-44	159.5	80.3	Class A Clear
KTUD-LP 10264	LAS VEGAS NV LIC C	BLTTL 19990406JB	25(Z)	80.2	DA 20765	35-56-44 115-02-31	337.1	93.7	Class A Clear
KTUD-LP 10264	LAS VEGAS NV CP C	BPTTA 20010907AA	25(Z)	88.9	DA 41141	35-56-44 115-02-33	337.0	93.7	Class A Clear
KNBX-LP 33819	LAS VEGAS NV CP C	BPTTL 20010116AD	31(+)	2.1	DA 17638	35-56-43 115-02-32	337.1	93.7	Class A Clear
KMCC-DT 41237	LAUGHLIN NV CP C	BPCDT 20000907AG	32 II	51.3 -167	DA 36879	35-09-32 114-34-28	101.3	5.7	
DKMCC 97338	LAUGHLIN NV DTVALT	BPRM 20000328AA	32 II	50.0 817	ND	35-01-57 114-21-56	121.6	28.9	
DKCFG	FLAGSTAFF AZ DTV-ALT		32 II	50.0 594	DA	35-14-26 111-35-48	87.5	276.9	223.7 Clear
KCFG-DT 35104	FLAGSTAFF AZ CP C	BPCDT 19991004AB	32 II	1000.0 343	ND 28622	34-58-06 111-30-29	93.6	286.2	223.7 Clear
98203	MEXICALI BN		32(+) II			32-39-00 115-28-00	195.5	290.3	244.0 Clear
KFBT 10195	LAS VEGAS NV LIC C	BLCT 19890810KE	33(+) II	1350.0 581	DA 24019	35-56-44 115-02-31	337.1	93.7	<12, >106 Short
KMCC 41237	LAUGHLIN NV CP C	BMPCT 20000815AD	34(+) II	513.0 -167	DA 34483	35-09-32 114-34-28	101.3	5.7	<24.1, >96.6 Clear
K36DU 56171	LAKE HAVASU AZ LIC C	BLTTL 19960308IA	36(N)	1.53	DA 21662	34-36-11 114-22-14	158.9	67.3	Class A Clear

FIGURE 4
Sheet 2 of 2

<u>Call</u> <u>FID</u>	<u>City</u> <u>St</u> <u>Status</u>	<u>File</u> <u>Num.</u>	<u>Chan.</u> <u>Zone</u>	<u>ERP-kW</u> <u>HAAT-m</u>	<u>DA</u> <u>ID</u>	<u>Latitude</u> <u>Longitude</u>	<u>Bearing</u> <u>(deg.)</u>	<u>Distance</u> <u>(km)</u>	<u>Required</u> <u>(km)</u>
KBLR 63768	PARADISE NV LIC C	BLCT 19890427KI	39(+) II	1320.0 367	DA 19625	36-00-31 115-00-22	340.4	99.0	<24.1,>96.6 Clear
KBLR 63768	PARADISE NV CP C	BMPCT 19990310KE	39(+) II	1320.0 357	DA 17525	36-00-36 115-00-20	340.4	99.2	<24.1,>96.6 Clear
PRM	LAKE HAVASU AZ ADD C		40(+) II			34-29-02 114-19-19	159.3	81.2	<24.1,>96.6 Short

Separation study used for allocation reference purposes onl. Proposed KMCC-DT operation complies with the FCC's interference standards using the procedures outlined in the FCC's OET-69 Bulletin.