

TECHNICAL EXHIBIT
MINOR MODIFICATION APPLICATION
STATION KCAU-DT (FACILITY ID 11265)
SIOUX CITY, IOWA

FEBRUARY 27, 2007

CH 30 500 KW 558 M

TECHNICAL EXHIBIT
MINOR MODIFICATION APPLICATION
STATION KCAU-DT (FACILITY ID 11265)
SIOUX CITY, IOWA
CH 30 500 KW 558 M

Table of Contents

Technical Narrative

Figure 1	Antenna and Supporting Structure
Figure 2	Vertical Antenna Pattern
Figure 3	Predicted FCC Coverage Contours

TECHNICAL EXHIBIT
MINOR MODIFICATION APPLICATION
STATION KCAU-DT (FACILITY ID 11265)
SIOUX CITY, IOWA
CH 30 500 KW 558 M

Technical Narrative

This Technical Exhibit supports a minor modification application for digital television station KCAU-DT on channel 30 at Sioux City, Iowa. Station KCAU-DT is authorized (CP) to operate with a non-directional antenna effective radiated power (ERP) of 1000 kilowatts (kW) and an antenna height above average terrain (HAAT) of 564 meters (BMPCDT-20000428ABE).

Proposed Facilities

Station KCAU proposes to relocate to an adjacent tower where its analog operation currently operates, reduce ERP and increase antenna HAAT. The new site coordinates are (NAD27): 42-35-11 N, 96-13-56 W. It is proposed to operate with a non-directional antenna ERP of 500 kW at an antenna HAAT of 558 meters. A Dielectric TFU-32DSB-A (C), non-directional antenna is proposed. The supporting structure is assigned ASRN 1018564.

The proposed facility will not result in any extension of the authorized noise-limited contour, as shown in Figure 3. Therefore, the proposal meets the terms of the FCC Filing Freeze for digital television stations.¹

¹ See August 2004 Filing Freeze PN, DA 04-2446 (MB released Aug. 3, 2004).

Allocation Considerations

The proposed KCAU-DT operation meets the FCC's interference standards to pertinent analog (NTSC) and DTV assignments using the procedures outlined in the FCC's OET-69 Bulletin and a 2 kilometer grid cell size. The proposed KCAU-DT operation complies with the FCC's "de minimis" interference policy with respect to pertinent Class A TV assignments. If necessary, a waiver of the FCC rules is requested with respect to use of the OET-69 interference procedures.

Calculations have been made concerning interference that the proposed KCAU-DT operation would receive. The calculations are based on the OET-69 procedures using a 2 kilometer grid and the 2000 Census. After consideration of terrain and interference, the proposed KCAU-DT operation would serve 556,600 people (or 113% of the replication value). This complies with the KCAU-DT certification and FCC's "use-it-or-lose-it" requirement.

Radiofrequency Electromagnetic Field Exposure

The proposed KCAU-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 530 meters above ground level with a maximum ERP of 500 kW. A conservative relative field value of 0.5 was assumed for the antenna calculation (see Figure 2). The calculated power density at a point 2 meters above ground level will not exceed 0.015 mW/cm^2 . This is less than 5% of the FCC's recommended limit of 0.38 mW/cm^2 for channel 30 for an "uncontrolled" environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. As this is a multi-user site, an agreement between the stations will control site 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.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.

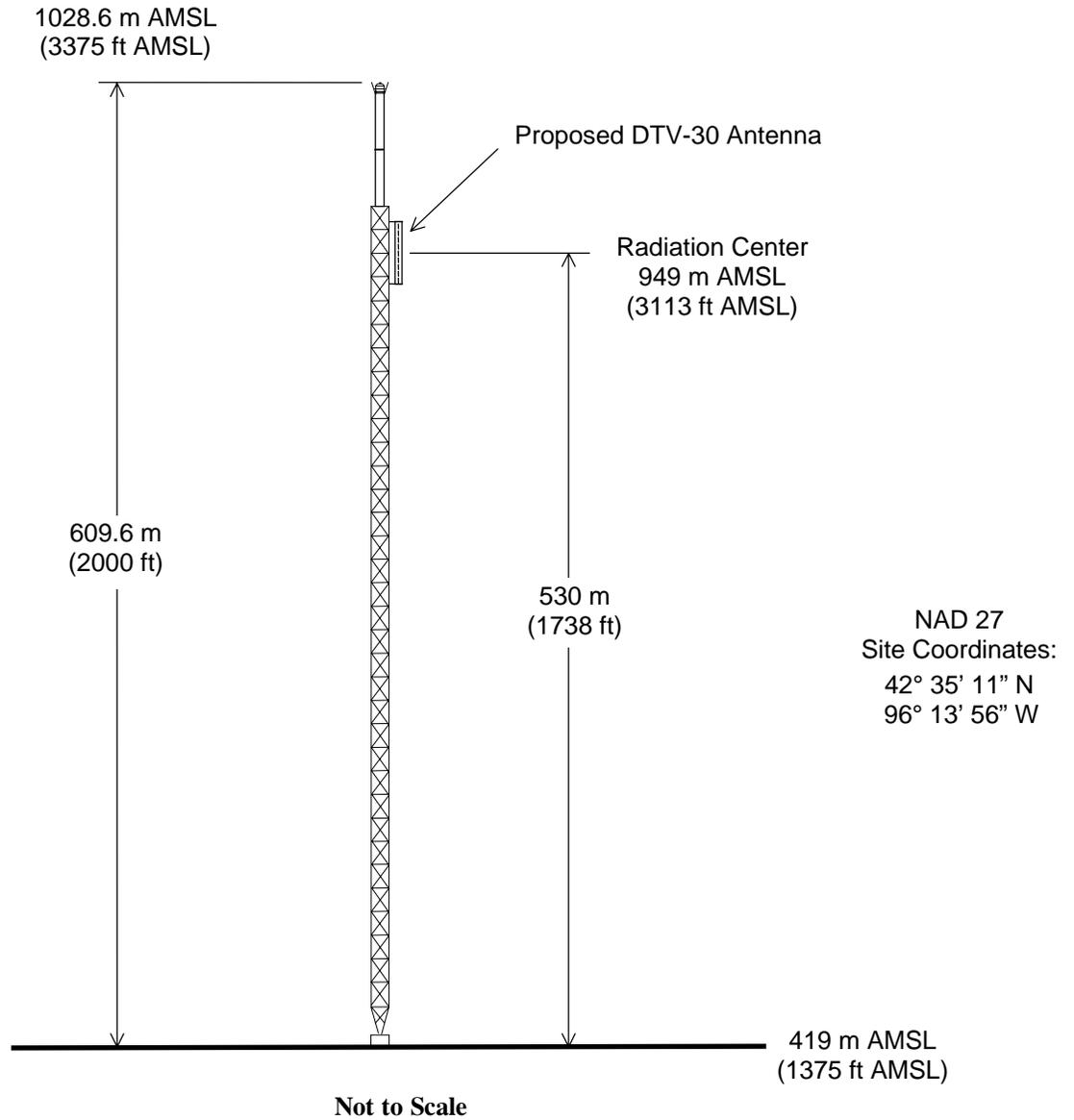


Jonathan N. Edwards
du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237
(941) 329-6000
JON@DLR.COM

February 27, 2007



Registration No. 1018564



ANTENNA AND SUPPORTING STRUCTURE

STATION KCAU-DT

SIOUX CITY, IOWA

CH 30 500 KW 558 M

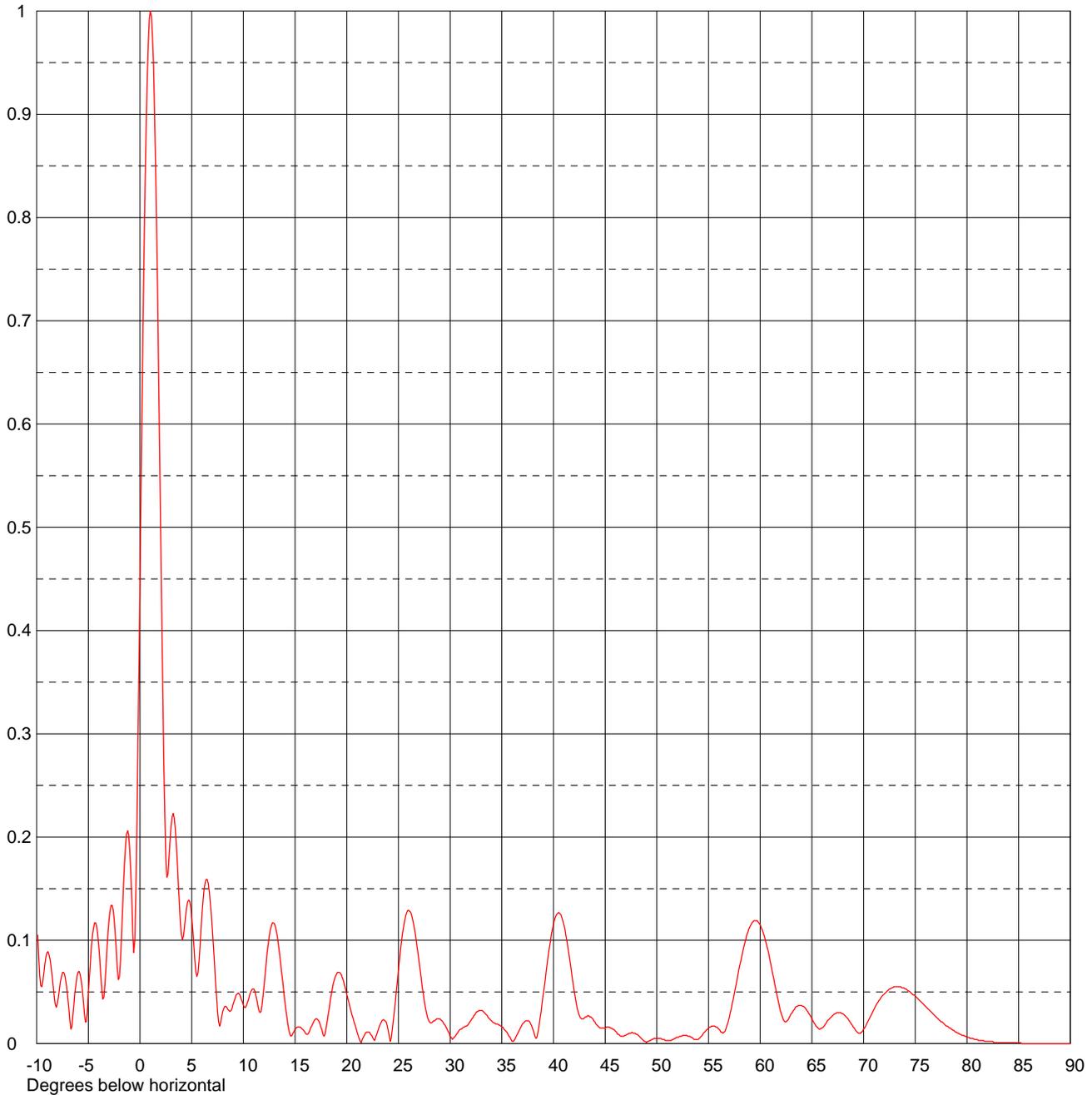
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



Date **27 Feb 2007**
Call Letters **KCAU-DT** Channel **30**
Location **Sioux City, IA**
Customer
Antenna Type **TFU-32DSB-A (C)**

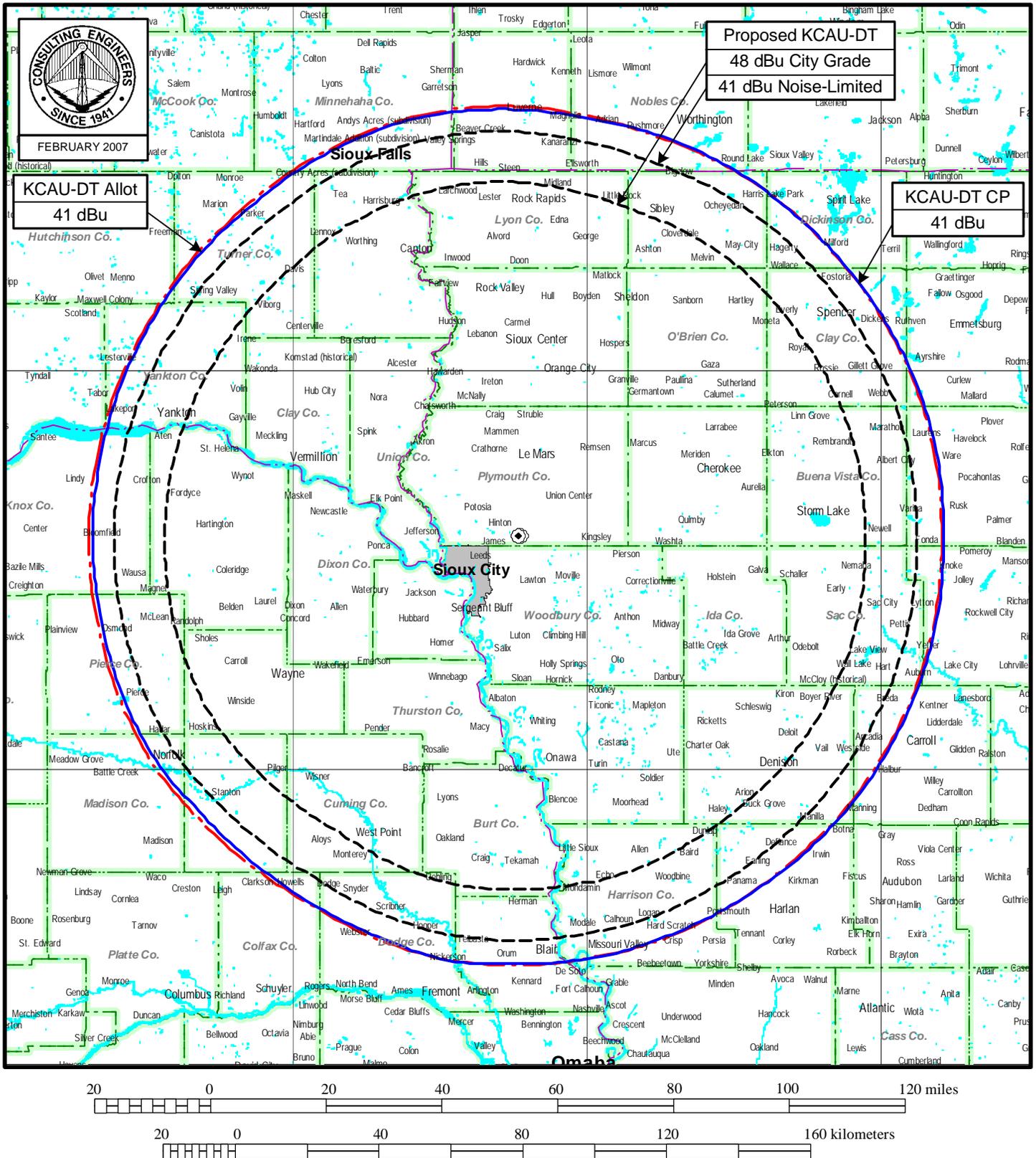
ELEVATION PATTERN

RMS Gain at Main Lobe	32.0 (15.05 dB)	Beam Tilt	1.00 Degrees
RMS Gain at Horizontal	6.7 (8.26 dB)	Frequency	569.00 MHz
Calculated / Measured	Calculated	Drawing #	32B320100-90



Remarks:

Figure 3



PREDICTED COVERAGE CONTOURS

STATION KCAU-DT

SIoux CITY, IOWA

CH 30 500 KW 558 M

du Treil, Lundin & Rackley, Inc Sarasota, Florida