

TECHNICAL EXHIBIT
APPLICATION FOR DTV CONSTRUCTION PERMIT
IN SUPPORT OF ITS POST-TRANSITION FACILITY
STATION WDAZ-DT
DEVILS LAKE, NORTH DAKOTA
CH 8 19 KW 451 M

Technical Narrative - "5 Mile Waiver Request"

This Technical Exhibit supports an application for digital television (DTV) station WDAZ-DT for its final DTV facility at Devils Lake, North Dakota. This application requests a construction permit (CP) for a digital television operation on channel 8 at Devils Lake with a non-directional effective radiated power of 19 kilowatts. WDAZ-DT intends to reuse its existing Channel 8 analog transmitting antenna for digital operation.

WDAZ-DT is requesting processing under the "5 mile waiver" procedure to allow as much recovery of its noise-limited contour up to the licensed NTSC Grade B contour as possible.

Proposed Facilities

Station WDAZ-DT proposes to operate DTV channel 8 from its NTSC transmitter site. The antenna height above average terrain for the channel 8 DTV operation will be 451 meters. The proposed WDAZ-DT effective radiated power exceeds the Commission's *Appendix B* allocated maximum

effective radiated power in some azimuthal directions.¹ Therefore, an allocation study was completed to ensure no prohibited interference would occur.

The proposed DTV transmitter site will be located at its NTSC transmitter site. Therefore, the proposed site location is:

48° 08' 18" North Latitude
97° 59' 35" West Longitude

A sketch of antenna and pertinent elevations are included as Figure 2.

Figure 3 is a map showing the DTV predicted coverage contour and the associated analog Grade B coverage contour. The extent of the contour has been calculated using the normal FCC prediction method. The Devils Lake city limits were derived from information contained in the 2000 U.S. Census of Population and Housing.

Population Served

The herein proposed WDAZ-DT facility is predicted to serve 164,797 persons, post-transition based upon the 2000 Census. WDAZ-DT's associated Appendix B facility is predicted to serve 150,000 persons. Therefore, the herein proposed WDAZ-DT facility would serve more than 100% of WDAZ-DT's Appendix B population.

¹ See Seventh Report And Order And Eighth Further Notice Of Proposed Rule Making in the Matter of Advanced Television Systems and their Impact Upon the Existing Television Broadcast Service, MB Docket 87-268, Released August 6, 2007; Adopted August 1, 2007.

Allocation Considerations

The proposed WDAZ-DT Channel 8 facility meets the requirements of Section 73.623 of the FCC Rules concerning predicted interference to other Appendix B DTV allotments. Longley-Rice interference analyses were conducted pursuant to the requirements of the FCC Rules; OET Bulletin No. 69; and published FCC guidelines for preparation of such interference analyses. The Longley-Rice interference analyses were conducted using the software developed by du Treil, Lundin & Rackley, Inc. based on the FCC published software routines.² Stations selected for analysis were determined pursuant to the distance requirements outlined in the FCC DTV Processing Guidelines Public Notice. The results of the interference analyses for the proposed WDAZ-DT facility are summarized herein at Figure 4. As indicated therein, the proposed facility will meet the 0.5% criterion outlined in the FCC Rules and published guidelines with respect to all considered stations.³

Radiofrequency Electromagnetic Field Exposure

The proposed WDAZ-DT facilities were evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level to workers and the general public. The radiation center for the proposed WDAZ-DT antenna is

² 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 2 km was employed.

³ Interference analysis results reflect the net change in interference to a given station considering the interference predicted to occur from all other stations (i.e. "masking") including the allotment facility

located 424 meters above ground level. The maximum effective radiated power is 19 kilowatts. A "worst-case" downward relative field value of 0.25 is assumed for the antenna's downward radiation. The calculated power density at a point 2 meters above ground level is 0.0002 mW/cm^2 . This is less than 5 percent of the Commission's recommended limit of 0.2 mW/cm^2 for channel 8 for an "uncontrolled" environment.

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

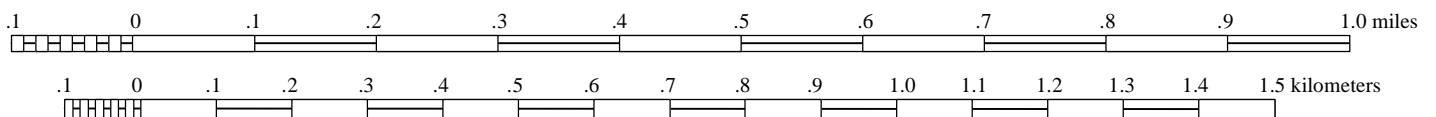
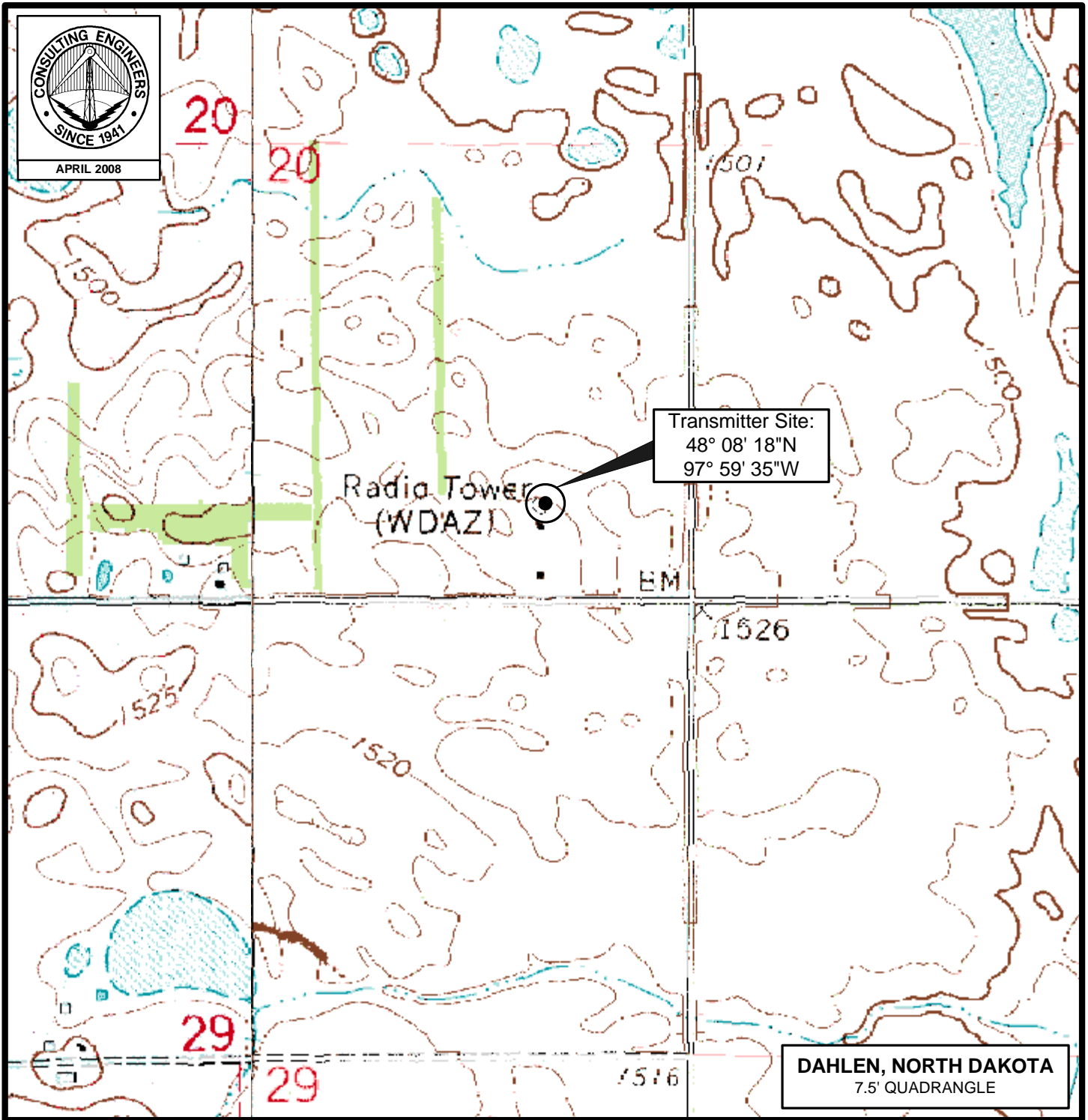
It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.

Charles Cooper

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 32437
941.329.6000

April 18, 2008

Figure 1



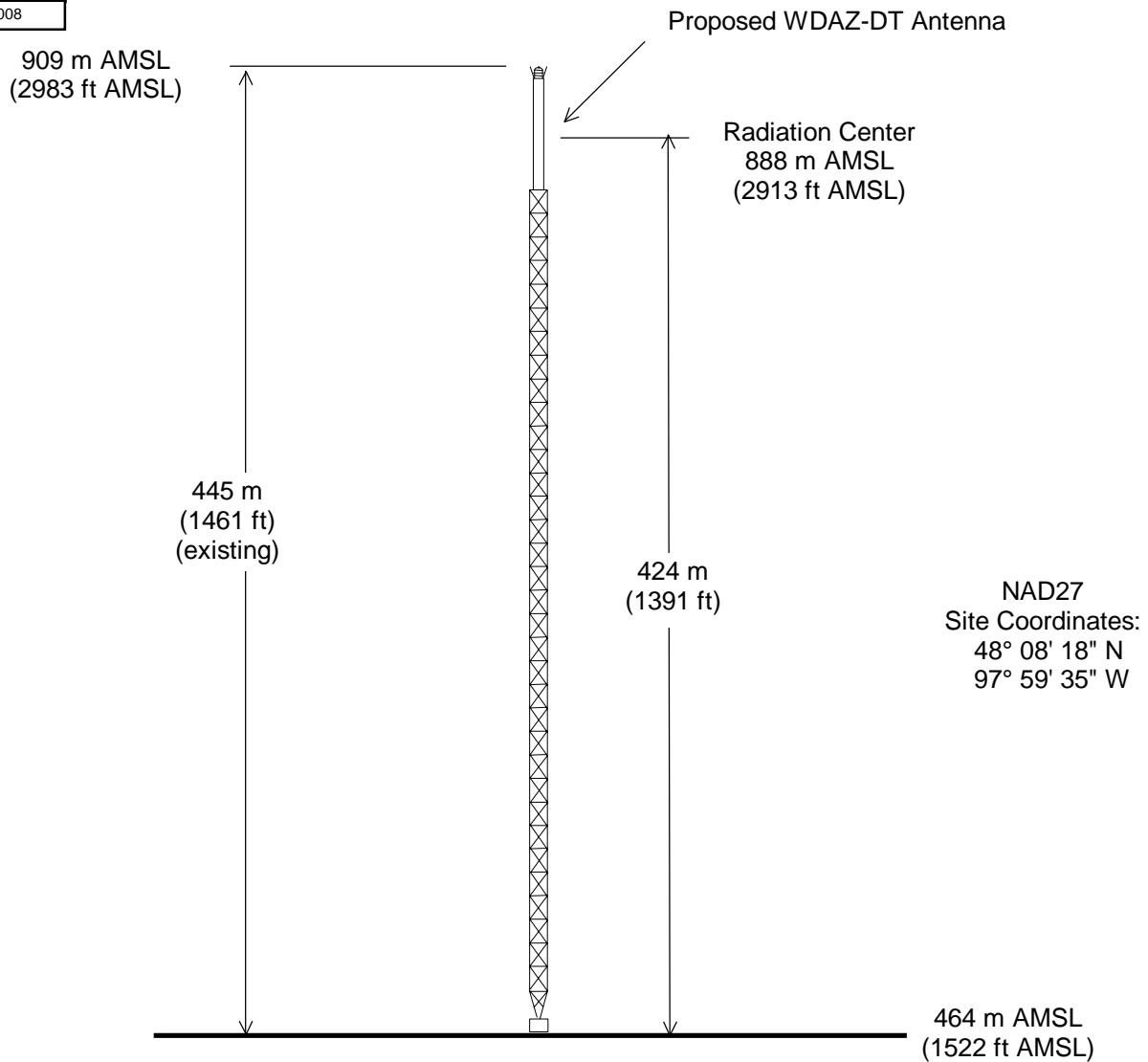
PROPOSED TRANSMITTER SITE

DTV STATION WDAZ-DT
DEVILS LAKE, NORTH DAKOTA
CH 8 19 KW 451 M

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



ASRN: 1038758



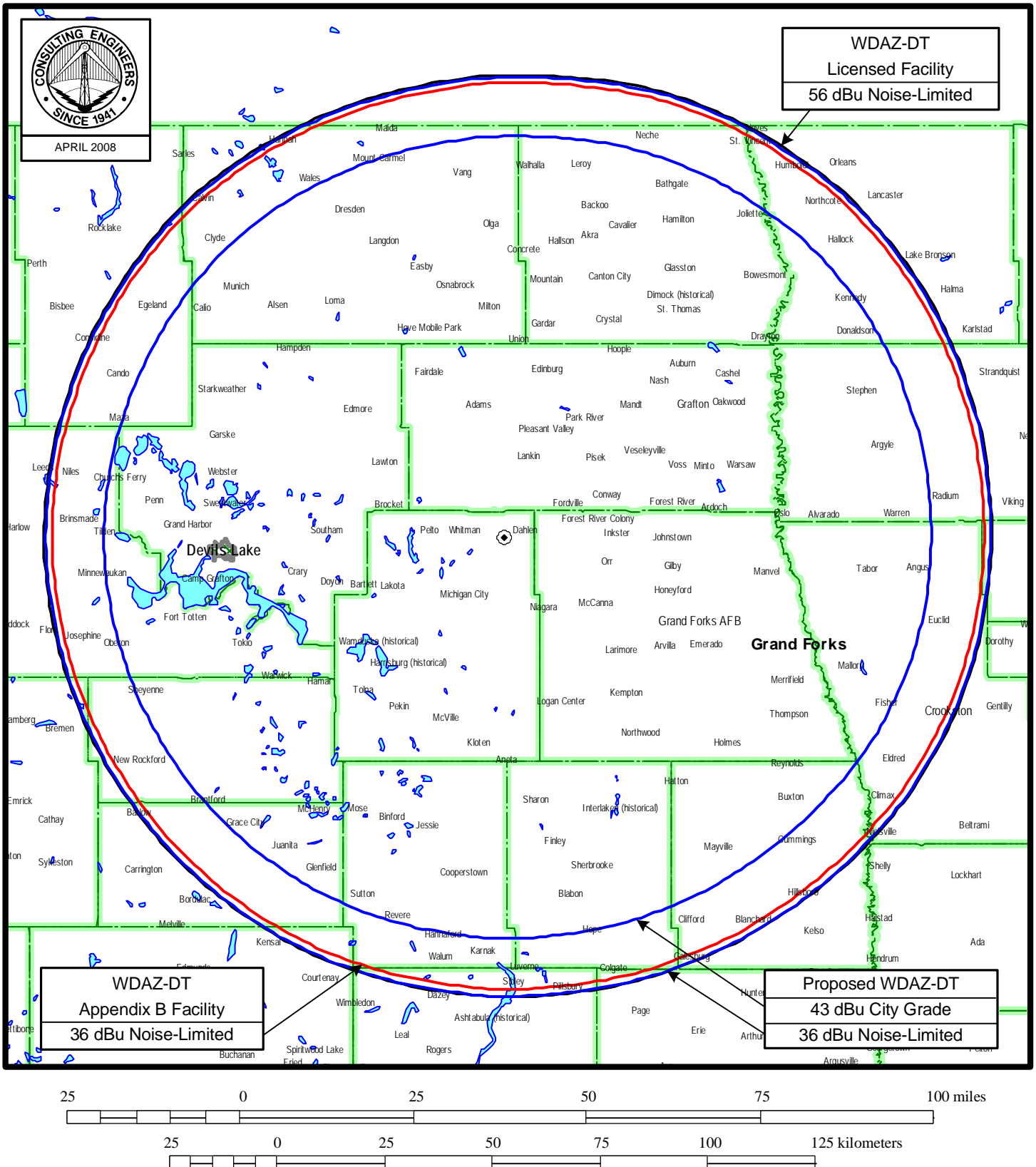
Not to Scale

ANTENNA AND SUPPORTING STRUCTURE

DTV STATION WDAZ-DT
DEVILS LAKE, NORTH DAKOTA
CH 8 19 KW 451 M

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

Figure 3



PREDICTED COVERAGE CONTOURS

STATION WDAZ-DT
DEVILS LAKE, NORTH DAKOTA
CH 8 19 KW 451 M

du Treil, Lundin & Rackley, Inc Sarasota, Florida

TECHNICAL EXHIBIT
 APPLICATION FOR DTV CONSTRUCTION PERMIT
 IN SUPPORT OF ITS POST-TRANSITION FACILITY
 STATION WDAZ-DT
 DEVILS LAKE, NORTH DAKOTA
 CH 8 19 KW 451 M

OET-69 Post-Transition Interference Analysis

Census data selected 2000

Post Transition Data Base Selected
 /export/home/cdbb/tvdb.sff_G
 TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 04-18-2008 Time: 17:20:17

Record Selected for Analysis

WDAZ-TV USERRECORD-01 DEVILS LAKE ND US
 Channel 08 ERP 19. kW HAAT 453. m RCAMSL 00888 m
 Latitude 048-08-18 Longitude 0097-59-35
 Status APP Zone 2 Border
 Last update Cutoff date Docket
 Comments
 Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	36.0 dBu F(50,90) (km)
0.0	19.000	436.5	107.9
45.0	19.000	490.3	111.8
90.0	19.000	504.4	112.7
135.0	19.000	466.1	110.2
180.0	19.000	429.7	107.3
225.0	19.000	431.4	107.5
270.0	19.000	432.4	107.6
315.0	19.000	432.2	107.5

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite zone

Proposed facility OK toward Table Mountain

Proposed facility is within the Canadian coordination distance
 Distance to border = 95.8km

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Figure 4

```

*****
                          Start of Interference Analysis

Channel      Proposed Station
Call         City/State      ARN
08           WDAZ-TV         DEVILS LAKE ND      USERRECORD01

Stations Potentially Affected by Proposed Station

Chan  Call      City/State      Dist(km) Status Application Ref. No.
07    KJRR      JAMESTOWN ND      147.0   LIC    BLCT      -881104KF
08    KESD-TV   BROOKINGS SD       426.5   CP     BFCET     -20050812AAZ

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Analysis of Interference to Affected Station 1

Analysis of current record
Channel      Call         City/State      Application Ref. No.
07           KJRR      JAMESTOWN ND      BLCT      -881104KF

Stations Potentially Affecting This Station

Chan  Call      City/State      Dist(km) Status Application Ref. No.
07    KCCO-TV   ALEXANDRIA MN      311.3   CP     BDTV      -00000015
07    KQCD-TV   DICKINSON ND       319.9   CP     BDTV      -00000011
07    KTTW      SIOUX FALLS SD     413.1   CP     BPCDT     -19991029ACY
08    WDAZ-TV   DEVILS LAKE ND     147.0   APP     USERRECORD-01
Proposal causes no interference

#####

Analysis of Interference to Affected Station 2

Analysis of current record
Channel      Call         City/State      Application Ref. No.
08           KESD-TV   BROOKINGS SD      BFCET     -20050812AAZ

Stations Potentially Affecting This Station

Chan  Call      City/State      Dist(km) Status Application Ref. No.
07    KCCO-TV   ALEXANDRIA MN      222.2   CP     BDTV      -00000015
07    KTTW      SIOUX FALLS SD     101.5   CP     BPCDT     -19991029ACY
08    KCCI      DES MOINES IA       405.8   CP     BPCDT     -19970617KE
08    KLKN      LINCOLN NE         384.0   CP     BDTV      -00000033
08    KZSD-TV   MARTIN SD          360.7   CP     BDTV      -00000029
09    KCAU-TV   SIOUX CITY IA      210.6   CP     BDTV      -00000051
09    KABY-TV   ABERDEEN SD        100.4   CP     BDTV      -00000049
08    WDAZ-TV   DEVILS LAKE ND     426.5   APP     USERRECORD-01

Proposed station is beyond the site to
nearest cell evaluation distance

#####

Analysis of Interference to Affected Station 3

Analysis of current record
Channel      Call         City/State      Application Ref. No.
08           WDAZ-TV   DEVILS LAKE ND      USERRECORD-01

Stations Potentially Affecting This Station

Chan  Call      City/State      Dist(km) Status Application Ref. No.
07    KJRR      JAMESTOWN ND      147.0   LIC    BLCT      -881104KF
08    KESD-TV   BROOKINGS SD       426.5   CP     BFCET     -20050812AAZ

Total scenarios = 1

Result key: 1

```

Figure 4

```
Scenario      1  Affected station      3
Before Analysis

Results for:  8A ND DEVILS LAKE      USERRECORD01      APP
      HAAT 453.0 m, ATV ERP  19.0 kW

      POPULATION      AREA (sq km)
within Noise Limited Contour      159814      37411.6
not affected by terrain losses      159560      37319.4
lost to NTSC IX                      0          0.0
lost to additional IX by ATV          0          0.0
lost to ATV IX only                  0          0.0
lost to all IX                      0          0.0

Potential Interfering Stations Included in above Scenario      1

#####

FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED
```