EXHIBIT E

ENGINEERING STATEMENT
APPLICATION FOR A DTV
CONSTRUCTION PERMIT FOR FLASHCUT FOR
AN EXISTING TELEVISION TRANSLATOR
K27HJ, PIERRE, SOUTH DAKOTA
CHANNEL 27 6.76 KW MAX ERP 635.3 METERS RC/AMSL

JULY 2015

COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington)
) ss
District of Columbia)

Donald G. Everist, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer, a Registered Professional Engineer in the District of Columbia, and is President, Secretary and Treasurer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1420 N Street, N.W., Suite One, Washington, D.C. 20005;

That his qualifications are a matter of record in the Federal Communications Commission;

That the attached engineering report was prepared by him or under his supervision and direction and

That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.

Donald G. Everist
District of Columbia
Professional Engineer
Registration No. 5714

Subscribed and sworn to before me this 29th day of July, 2015.

Notary Public

My Commission Expires: 2/28/2018

CAROLYN LYONS NOTARY PUBLIC DISTRICT OF COLUMBIA 02-28-2018

Introduction

This engineering statement has been prepared on behalf of Red River Broadcasting Co., LLC, licensee of TV translator K27HJ, Pierre, South Dakota. This statement supports the licensee's request to convert to DTV operation on the currently licensed analog Channel 27, commonly referred to as "flash-cut" with a DTV effective radiated power ("ERP") of 6.76 kW at a radiation center above mean sea level ("RCAMSL") of 635.3 meters. The FCC staff indicates that this application will not require Canadian concurrence.

Transmitter Site

The existing antenna will be utilized and no significant alteration of the tower is proposed or required. The existing tower (Exhibit E-1) is located four miles south of Fort Pierre, just off Highway 83 on Cedar Hill Road. There is no change in transmitter site. The geographic coordinates of the site follow below.

North Latitude: 44° 18' 42"

West Longitude: 100° 21' 09"

NAD-27

Based on ASRN 1042183:

NAD-83

North Latitude: 44° 18' 42"

West Longitude: 100° 21' 10"

Therefore, the coordinates for the tower site will specify the ASRN 1042183 coordinates.

Elevation Data

Elevation of site above mean sea level	530.3 meters (1740 feet)
Center of radiation of antenna above ground level	105 meters (344.4 feet)
Center of radiation of antenna above mean sea level	635.3 meters (2084.3 feet)
Overall tower height above ground level	152.1 meters (499 feet)

Equipment Data

Transmitter:	Type-approved
Transmission Line:	Andrew, Type HJ7-50A, 1-5/8", 121.9 meters (400 feet) with 63% efficiency
Antenna:	Andrew, AL12 with maximum gain of 13.32 dB and 1.25° electrical beam tilt

Power Data

Transmitter:	0.500 kW	-3.01 dBk
Emission Mask:	Simple	
Transmission Line Loss:	0.185 kW	2.01 dB
Input Into Antenna:	0.315 kW	-5.02 dBk
Antenna Gain:	21.48	13.32 dB
ERP:	6.76 kW	8.30 dBk

As indicated above, the transmitter with typical power output of 0.5 kW will deliver 0.315 kW to the input of the antenna. The antenna, having a maximum gain of 13.32 and an electrical beam tilt of 1.25°, will produce maximum ERP of 6.76 kW. A coverage map providing the protected contour of the proposed facility compared to the currently licensed operation of K27HJ has been included as Exhibit E-2 of this report. The antenna elevation pattern with associated tabulation and the horizontal pattern with accompanying tabulation are on file at the Commission as this antenna make and model has been designated as "Off-the-Shelf", and is the currently licensed antenna for K27HJ with no alterations proposed.

Other Broadcast Facilities

A brief analysis was completed to determine the presence of stations in the vicinity of the K27HJ tower using the July 1, 2015 data contained within the Commission's Consolidated Database System ("CDBS"). Within 500 meters of the proposed site, there are three authorized FM radio stations, two authorized (LP) aside from K27HJ. There is one AM facility within 3.2 km of the existing tower. Although no adverse technical effects are expected due to no physical changes, the licensee will take measures to resolve any problems proven to be related to the changes proposed in this application.

Interference Analysis

A study of predicted interference caused by the proposed K27HJ low-power digital operation has been performed using the Longley-Rice program for which the source data has been posted by the Commission on its website at http://www.fcc.gov/oet/dtv/dtv_apps.html. The FCC's FORTRAN-77 code was modified only to the extent necessary (primarily input/output

handling) for the program to run on a Microsoft Windows XP/Intel platform. Comparison of service/interference areas and population indicates this model closely matches the FCC's digital low-power TV/translator evaluation program. Best efforts have been made to use data and calculation identical to the FCC's program. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 1 sq. km. Using 3-second terrain data sampled approximately every 1.0 km at one-degree azimuth intervals with 2000 census centroids, all studies are based upon data in the current CDBS database update of the FCC's engineering database. A Longley-Rice study was performed with the proposed K27HJ low-power digital facilities and all relevant stations listed in the FCC database as of July 1, 2015. The study results and the included stations are listed in Table I.

Other Licensed and Broadcast Facilities

No adverse technical effect is anticipated by the proposed DTV operation to any other FCC licensed facility. If required, the licensee will install filters or take other measures as necessary to resolve the problem.

FCC Rule, Section 1.1307

Pursuant to OET Bulletin No. 65 dated August 1997, these non-broadcast stations are all exempt from RFF evaluations for the following reason:

Station	Licensed Under Part No.	Reason for Exemption
	Part 74, Subpart F	Subpart F Exempt
	Part 90	Antenna Height > 10 meters
	Part 90	ERP < 1000 watts
	Part 74, Subpart F	Subpart F Exempt

The RFF contribution of each station will be calculated using the following formula:

$$S = \frac{33.4(F^2)\ \text{Total ERP}}{R^2}$$

where:

S = power density in μW/cm²
F = relative field factor
Total ERP = ERP Horizontal Polarization + ERP Vertical Polarization
R = RCAGL - 2 meters

ERP = RMS ERP in watts for DTV Stations

ERP = $[0.4\ ERP_V + ERP_A]$ for NTSC Stations
ERP_V = peak visual ERP in watts
ERP_A = RMS aural ERP in watts

The proposed 6.76 kW directional operation will utilize an Andrew, Type AL12 antenna (or equivalent) described above with a center of radiation above ground of 105 meters. The proposed antenna is side-mounted on an existing tower with an overall height of 152.1 meters above ground. The proposed digital operation of K27HJ will create a radiofrequency field level of 1.3 $\mu W/cm^2$ at the base of the tower. This level is less than 0.4% of the Maximum Permissible Exposure ("MPE") level for the general population and uncontrolled environment. Therefore the MPE change from analog to digital will not be significant.

Authorized personnel and rigging contractors will be alerted to the potential zone of high field levels on the tower, and if necessary, the station will operate with reduced power or terminate the operation of the transmitter as appropriate when it is necessary for authorized personnel or contractors to perform work on or near the tower. Workers and the general public, therefore, will not be subjected to RFF levels in excess of the current FCC guidelines.

Environmental Assessment

An environmental assessment ("EA") is categorically excluded under Section 1.1306 of the FCC Rules and Regulations as the tower was constructed prior to the requirements specified in WT Docket No. 03-128 and the licensee indicates:

(a)(1)	The existing tower is not located in an officially designated wilderness area.
(a)(2)	The existing tower is not located in an officially designated wildlife preserve.
(a)(3)	The proposed facilities will not affect any listed threatened or endangered species or habitats.
(a)(3)(ii)	The proposed facilities will not jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats.
(a)(4)	The proposed facilities located on a tower which was built prior to the adoption of WT Docket No. 03-128 and is grandfathered and has not affected any known districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.
(a)(5)	The existing tower is not located near any known Indian religious sites.
(a)(6)	The existing tower is not located in a flood plain.
(a)(7)	The installation of the DTV facilities on an existing tower will not involve a significant change in surface features of the ground in the vicinity of the tower.
(a)(8)	It is not proposed to equip the tower with high intensity white lights unless required by the FAA.
(b)	Workers and the general public will not be subjected to RFF levels in excess of the current FCC guidelines contained in OET Bulletin No. 65, Edition 97-01, dated August 1997 and Supplement A.

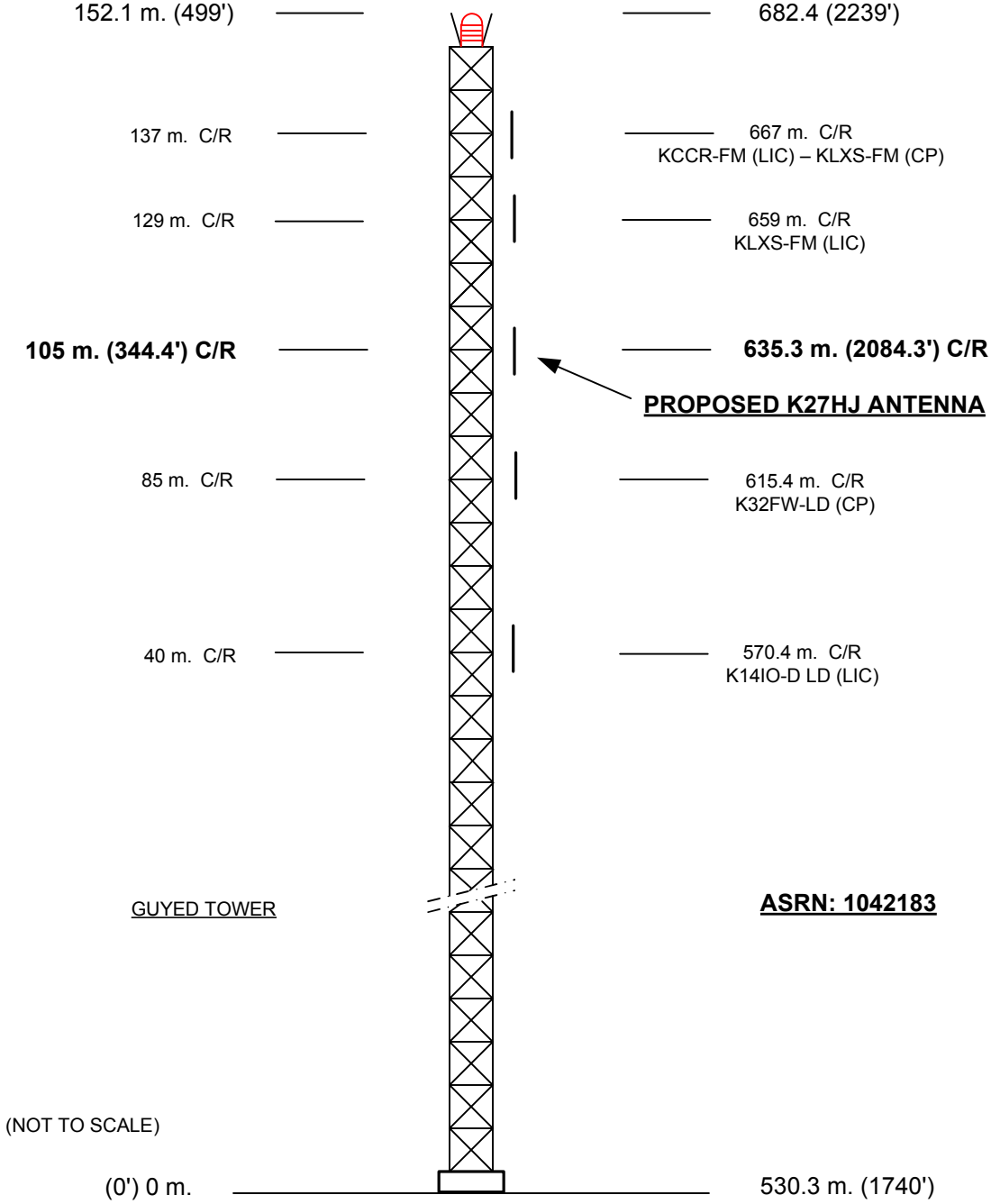
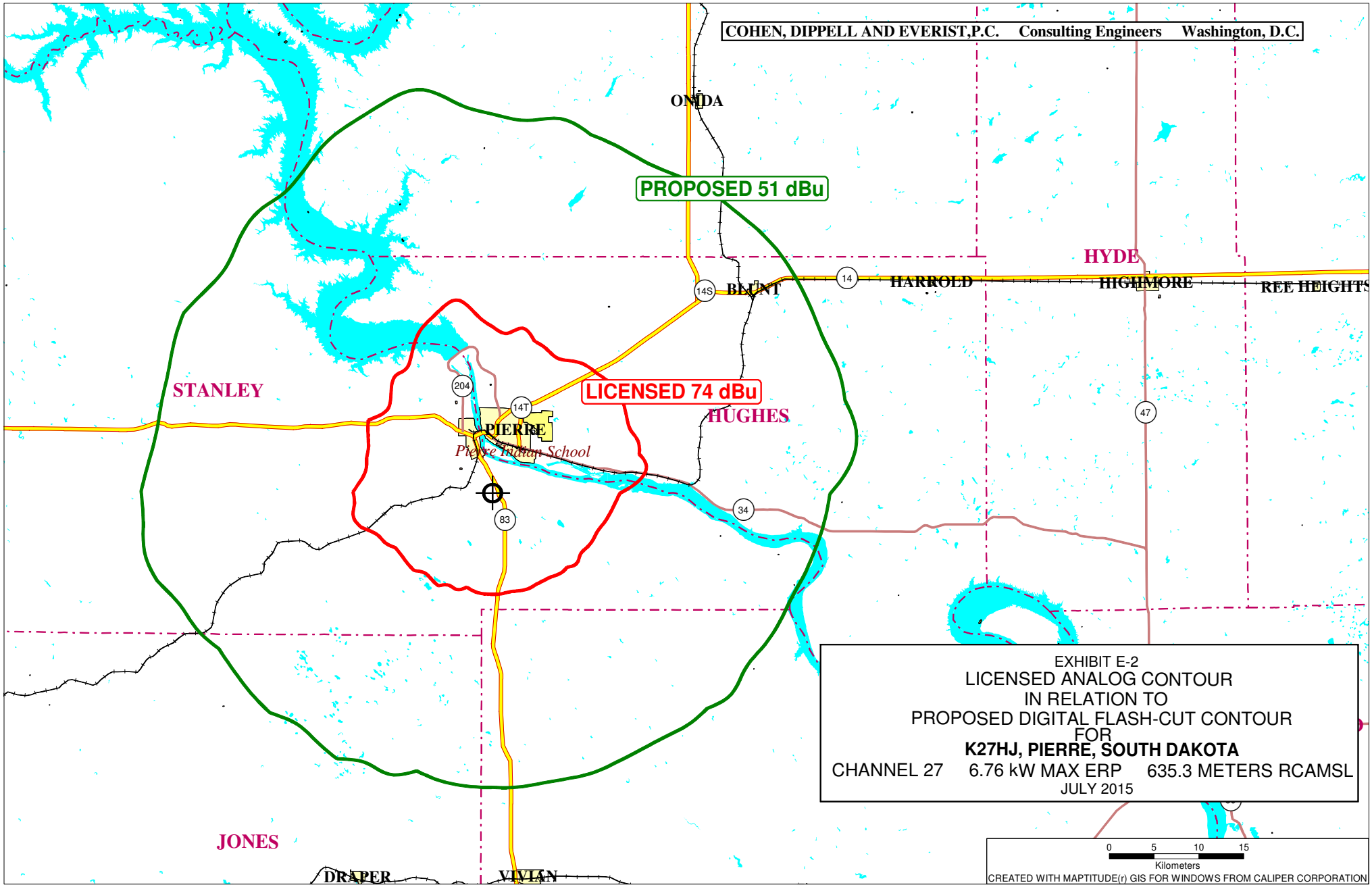


EXHIBIT E - 1
VERTICAL SKETCH
FOR THE DT FLASH-CUT OPERATION OF
K27HJ, PIERRE, SOUTH DAKOTA
JULY 2015

COHEN, DIPPELL and EVERIST, P.C. CONSULTING ENGINEERS


COHEN, DIPPELL AND EVERIST,P.C. Consulting Engineers Washington, D.C.
PROPOSED 51 dBu
LICENSED 74 dBu
ONIDA
HYDE
HARROLD
HIGHMORE
REE HEIGHTS
BLUNT
STANLEY
HUGHES
PIERRE
Pierre Indian School
JONES
DRAPER
VIVIAN
14
14S
14T
204
83
34
47
EXHIBIT E-2
LICENSED ANALOG CONTOUR
IN RELATION TO
PROPOSED DIGITAL FLASH-CUT CONTOUR
FOR
K27HJ, PIERRE, SOUTH DAKOTA
CHANNEL 27 6.76 kW MAX ERP 635.3 METERS RCAMSL
JULY 2015
0 5 10 15
Kilometers
CREATED WITH MAPTITUDE(r) GIS FOR WINDOWS FROM CALIPER CORPORATION

COHEN, DIPPELL AND EVERIST, P.C.

TABLE I
LONGLEY-RICE INTERFERENCE
FOR THE PRELIMINARY ALLOCATION FOR DIGITAL FLASHCUT
K27HJ, PIERRE, SOUTH DAKOTA
CHANNEL 27 6.76 KW ERP 635.3 METERS RC/AMSL
JULY 2015

N 44° 18' 42"
W 100° 21' 09"
NAD-27
Emission Mask: Simple

Channel	Call	City/State	Dist(km)	Status	FCC File No.	Result
26	K26MO-D	KADOKA SD	87.3	CP	BNPDTL-20100510AHV	No interference
26	KDLV-TV	MITCHELL SD	166.8	LIC	BLCDT-20081016ADD	No interference
27	K27LD-D	SALIX IA	392.3	CP	BNPDTL-20100505AFA	0.00%
27	K27MB-D	HEWITT MN	400.7	CP	BNPDTL-20100505AKW	No interference
27	KRWF	REDWOOD FALLS MN	386.5	LIC	BLCDT-20080502ABG	0.00%
27	K27ML-D	RUSHMORE MN	374.9	CP	BNPDTL-20100510AHZ	0.00%
27	K27LT-D	BAKER MT	374.4	LIC	BLDTT-20120227AAE	No interference
27	K27LN-D	FARGO ND	398.7	CP	BNPDTL-20100518AEF	No interference
27	K27MH-D	GARRISON ND	381.5	CP	BNPDTL-20100609AGS	0.00%
27	K27KZ-D	HEBRON ND	316.1	CP	BNPDTL-20100506ABX	No interference
27	K27LR-D	STEELE ND	283.3	CP	BNPDTL-20100505AMA	No interference
27	K27MP-D	NORFOLK NE	394.5	CP	BDCCDTL-20121001BAH	No interference
27	KHGI-CD	NORTH PLATTE NE	344.4	APP	BPDTA-20130329ABS	0.00%
27	KHGI-CD	NORTH PLATTE NE	344.4	LIC	BLDTL-20100120AAQ	0.00%
27	KHGI-LD	O'NEIL NE	250	LIC	BLDTL-20110512ACC	No interference
27	K27LB-D	ARLINGTON SD	265.8	CP	BNPDTL-20100505AEF	No interference
27	KWBH-LP	RAPID CITY SD	232	LIC	BLTTL-19970801JA	No interference
27	DKWSF-LP	SIOUX FALLS SD	301.8	APP	BSTA-20130102AAI	No interference
27	K27LJ-D	MOORCROFT WY	349	CP	BNPDTL-20100505AIK	0.00%
28	K28NJ-D	MITCHELL SD	191.9	CP	BNPDTL-20100510AID	0.00%
28	K28NH-D	MURDO SD	55.1	CP	BNPDTL-20100510AIO	0.63%
28	K28NI-D	WASTA SD	164.3	CP	BNPDTL-20100510AHL	0.00%