

ENGINEERING STATEMENT
IN SUPPORT OF AMENDMENT OF APPLICATION
BPCDT-20080313ACN
FOR THE PROPOSED DIGITAL TV OPERATION OF
KPRY-DT, PIERRE, SOUTH DAKOTA
CHANNEL 19 110 KW 347 METERS
APRIL 2008

This engineering statement has been prepared on behalf of Hoak Media of Dakota License, LLC, licensee of TV station KPRY-TV, Pierre, South Dakota, in support of an amendment of its application (BPCDT-20080313ACN) for a construction permit for post-transition digital TV (DTV) operation on Channel 19.

At present KPRY-TV, Facility ID Number 48660, operates its analog TV facilities on Channel 4 (66-72 MHz) with 100 kW effective radiated power (ERP) and 378 meters antenna height above average terrain (HAAT) using a non-directional TV antenna. KPRY-TV also has a license to operate its digital TV facility on Channel 19 (500-506 MHz) with 61 kW ERP, 347 meters HAAT and a directional TV antenna. In the Seventh Report and Order (MB Docket No. 87-268) the Commission has allotted Channel 19 for the KPRY-TV's DTV operation with 1000 kW ERP, 378 meters HAAT and a directional TV antenna. KPRY-TV filed an application (BPCDT-20080313ACN) for a construction permit to operate its post-transition DTV facilities on DTV Channel 19 with 311 kW ERP and 347 meters HAAT using a non-directional TV antenna. KPRY-DT is now proposing to amend the application to reduce the ERP to 110 kW so as not to extend the noise limited 41 dBu contour more than 5 miles (8 km) in any direction beyond the Appendix B facilities (see Figure 1).

The following information provides pertinent data for the proposed KPRY-DT operation.

Name of the Licensee:	Hoak Media of Dakota License, LLC
Station Location:	SD-Pierre
Channel:	19

Hours of Operation:	Unlimited			
Transmitter:	Type Accepted			
Antenna Type:	Dielectric, TFU-32DSB-A (C)			
Beam Tilt:	0.5 deg			
Antenna Coordinates:	North Latitude:	44 deg	03 min	07 sec
	West Longitude:	100 deg	05 min	03 sec
Transmitter output power:	As required to achieve authorized ERP			
Maximum effective radiated power (Average):	110 kW 20.41 dBk			
Elevation of site above mean sea level:	621.8 meters			
Overall height of the tower above ground:	331.9 meters			
Height of radiation center above ground (meters):	294 meters			
Height of radiation center above mean sea level (meters):	915.8 meters			
Height of radiation center above average terrain (meters):	347 meters			
Antenna Structure Registration Number:	1041931			

**Response to questions for Post Transition Expedited Processing listed on the
FCC Form 301, Section III-D-DTV Engineering**

Question 1. (a)

KPRY-TV will operate its DTV operation on Channel 19 as established in 47 C.F.R.
Section 73.622.

Question 1. (d)

KPRY-TV is proposing to operate its post-transition facilities which are slightly
smaller than established in Appendix B of the Seventh Report and Order (MB Docket
No. 87-268). The minor difference is due to lower ERP and HAAT and use of a non-

directional DTV antenna. The proposed noise-limited service contour (41 dBu) would not extend more than 5 miles (8 km) in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket 87-268 (see Figure 1).

Question 1. (e)

The proposed DTV operation would serve 40,081 people within the noise limited service area as compared to 45,000 predicted population defined in the new DTV Table in Appendix B. As such, KPRY-DT proposed noise limited would serve 89.1% population listed in the new DTV Table in Appendix B. Coverage of higher population (up to 95% of the estimated Appendix B population) would result in extension of noise limited contour by more than 5 miles (8 km) beyond that established by Appendix B of the Seventh Report and Order in MB Docket 87-268.

Waiver Request for Questions 1. (e)

The proposed KPRY-DT operation complies with the Commission's Filing Freeze Waiver Policy as described in paragraph 151 of the Report and Order in MB Docket 07-91 since it meets the following three conditions:

1. It would allow the station to use a new non-directional antenna for its digital TV operation
2. The expansion in service area would not be more than 5 miles in any direction than the authorized service area as defined by Appendix B facilities
3. It would not cause impermissible interference to other stations. An electromagnetic interference study conducted according to FCC OET Bulletin 69 indicates the proposed KPRY-DT operation on DTV Channel 19 will not cause more than 0.5% new interference to other stations.

Question 2.

The attached environmental statement demonstrates that there will not be any significant environmental impact from the proposed DTV operation in accordance with 47 C.F.R. Section 73.1307.

Question 3.

The attached map shows the proposed KPRY-DT contour will encompass the allotted principal community of Pierre, South Dakota (see Figure 2).

Question 4.

The proposed KPRY-DT facility complies with Section 73.1030 of the Commission's rules; therefore, notification to radio astronomy installations, radio receiving installations and FCC monitoring stations is not required.

Question 5.

The existing KPRY-DT tower is registered (ASR No. 1041931) by the Commission and no changes are proposed to require a change in the registration.

Census data selected 2000

Post Transition Data Base Selected

/space/software/cdbb/tvdb.sff_B

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 04-08-2008 Time: 10:52:27

Record Selected for Analysis

KPRY-TV USERRECORD-01 PIERRE SD US

Channel 19 ERP 110. kW HAAT 347. m RCAMSL 00916 m

Latitude 044-03-07 Longitude 0100-05-03

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	ERP	HAAT	41.0 dBu F(50,90)
(Deg)	(kW)	(m)	(km)
0.0	110.000	368.5	85.8
45.0	110.000	407.5	88.5
90.0	110.000	339.9	83.1
135.0	110.000	334.7	82.5
180.0	110.000	344.2	83.5
225.0	110.000	334.3	82.5
270.0	110.000	308.6	79.8
315.0	110.000	340.2	83.1

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

LANDMOBILE SPACING VIOLATIONS FOUND

NONE

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

Proposed Station

Channel	Call	City/State	ARN
19	KPRY-TV	PIERRE SD	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
19	KXMA-TV	DICKINSON ND	370.4	LIC	BDTV	-1000
19	KVRR	FARGO ND	419.1	LIC	BDTV	-1003
19	KTVG	GRAND ISLAND NE	389.7	LIC	BDTV	-1022
19	KXNE-TV	NORFOLK NE	304.0	LIC	BDTV	-1034

%%%

Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
19	KXMA-TV	DICKINSON ND	BDTV	-1000

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
19	KPRY-TV	PIERRE SD	370.4	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
19	KVRR	FARGO ND	BDTV	-1003

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
19	KBJR-TV	SUPERIOR WI	313.6	LIC	BDTV	-1770
20	KJRE	ELLENDALÉ ND	206.1	LIC	BDTV	-1001
19	KPRY-TV	PIERRE SD	419.1	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application Ref. No.
19	KTVG	GRAND ISLAND NE	BDTV -1022

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
18	KWNB-TV	HAYES CENTER NE	207.9	LIC	BDTV -1025
19	KWKS	COLBY KS	289.4	LIC	BDTV -0603
19	KSCW	WICHITA KS	337.7	LIC	BDTV -0628
19	KXNE-TV	NORFOLK NE	199.2	LIC	BDTV -1034
20	KETV	OMAHA NE	222.9	LIC	BDTV -1039
19	KPRY-TV	PIERRE SD	389.7	APP	USERRECORD-01

Proposed station is beyond the site to
nearest cell evaluation distance

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Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application Ref. No.
19	KXNE-TV	NORFOLK NE	BDTV -1034

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
19	KTVG	GRAND ISLAND NE	199.2	LIC	BDTV -1022
20	KETV	OMAHA NE	146.4	LIC	BDTV -1039
19	KPRY-TV	PIERRE SD	304.0	APP	USERRECORD-01

Total scenarios = 1

Result key: 1

Scenario 1 Affected station 4

Before Analysis

Results for: 19A NE NORFOLK BDTV 1034 LIC

HAAT 348.0 m, ATV ERP 53.8 kW

POPULATION AREA (sq km)

within Noise Limited Contour 227701 16408.1

KHANNA & GUILL, Inc. – Consulting Engineers

not affected by terrain losses	227553	16244.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	13175	211.5
lost to ATV IX only	13175	211.5
lost to all IX	13175	211.5

Potential Interfering Stations Included in above Scenario 1

19A NE GRAND ISLAND	BDTV	1022	LIC
20A NE OMAHA	BDTV	1039	LIC

After Analysis

Results for: 19A NE NORFOLK BDTV 1034 LIC

HAAT 348.0 m, ATV ERP 53.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	227701	16408.1
not affected by terrain losses	227553	16244.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	13274	267.4
lost to ATV IX only	13274	267.4
lost to all IX	13274	267.4

Potential Interfering Stations Included in above Scenario 1

19A NE GRAND ISLAND	BDTV	1022	LIC
20A NE OMAHA	BDTV	1039	LIC
19A SD PIERRE	USERRECORD01		APP

Percent new IX = 0.0462%

Worst case new IX 0.0462% Scenario 1

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Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application Ref. No.
19	KPRY-TV	PIERRE SD	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
19	KXMA-TV	DICKINSON ND	370.4	LIC	BDTV -1000

KHANNA & GUILL, Inc. – Consulting Engineers

19	KVRR	FARGO ND	419.1	LIC	BDTV	-1003
19	KTVG	GRAND ISLAND NE	389.7	LIC	BDTV	-1022
19	KXNE-TV	NORFOLK NE	304.0	LIC	BDTV	-1034

Total scenarios = 1

Result key: 2

Scenario 1 Affected station 5

Before Analysis

Results for: 19A SD PIERRE USERRECORD01 APP

HAAT 347.0 m, ATV ERP 110.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	40227	23538.7
not affected by terrain losses	40082	23334.3
lost to NTSC IX	0	0.0
lost to additional IX by ATV	1	8.0
lost to ATV IX only	1	8.0
lost to all IX	1	8.0

Potential Interfering Stations Included in above Scenario 1

19A NE NORFOLK BDTV 1034 LIC

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FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

ENVIRONMENTAL PROTECTION ACT

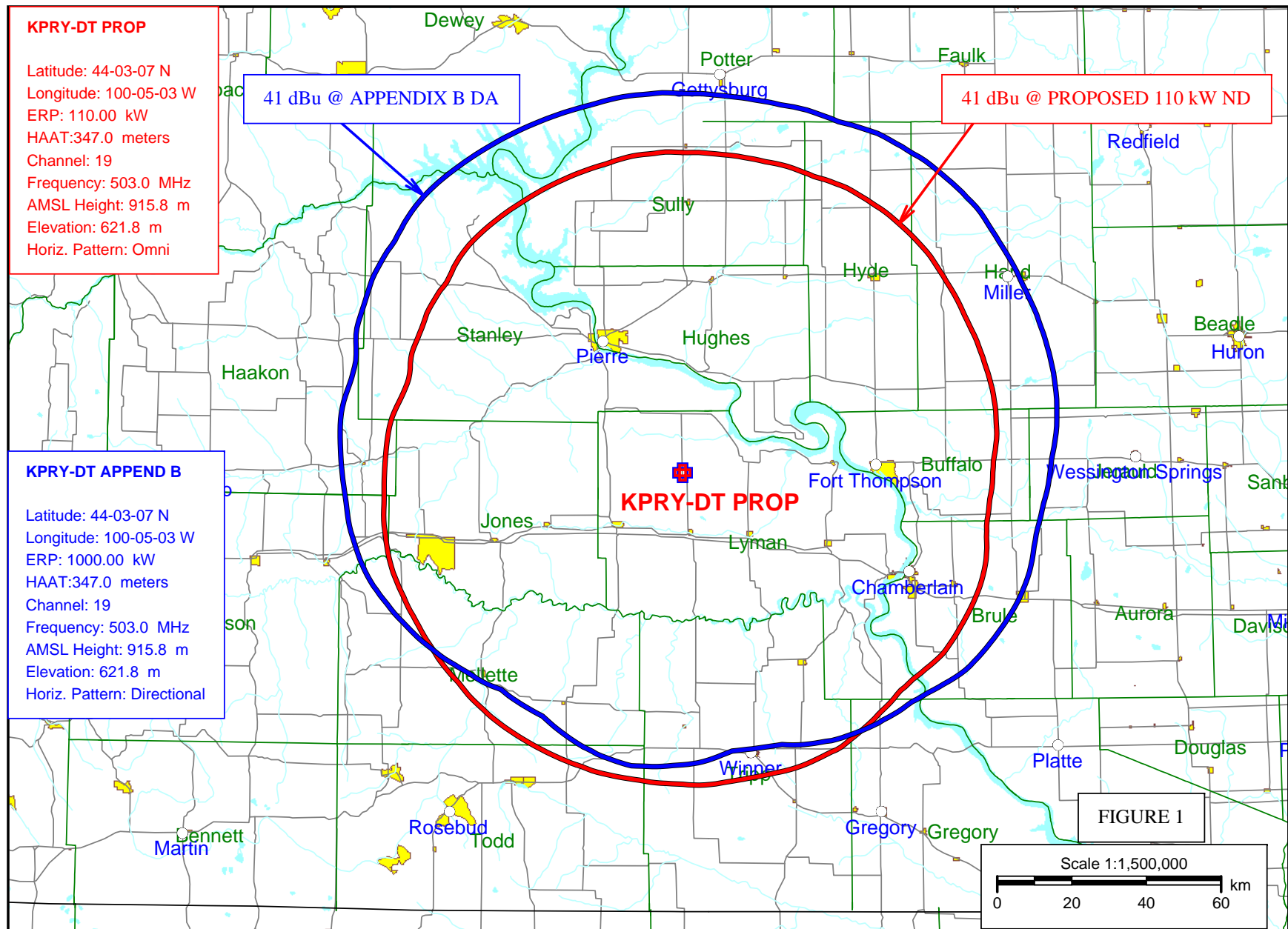
Since KPRY-DT will be using its currently licensed tower (ASR No. 1041931), for the DTV operation the environmental concerns listed in Section 1.1307(a) of the Commission's rules are not pertinent; therefore, those issues have not been addressed.

An evaluation has been made to determine compliance with the Commission's specified standards for human exposure to RF fields as set forth in the OET Bulletin No. 65 dated August 1997. For a maximum effective radiated power of 110 kW and a radiation center of 294 meters above ground level, the proposed Channel 19 DTV operation would have a maximum of 1.7 microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$) RF field at 2 meters above the base of tower assuming an antenna field factor of 0.2 in the downward direction.

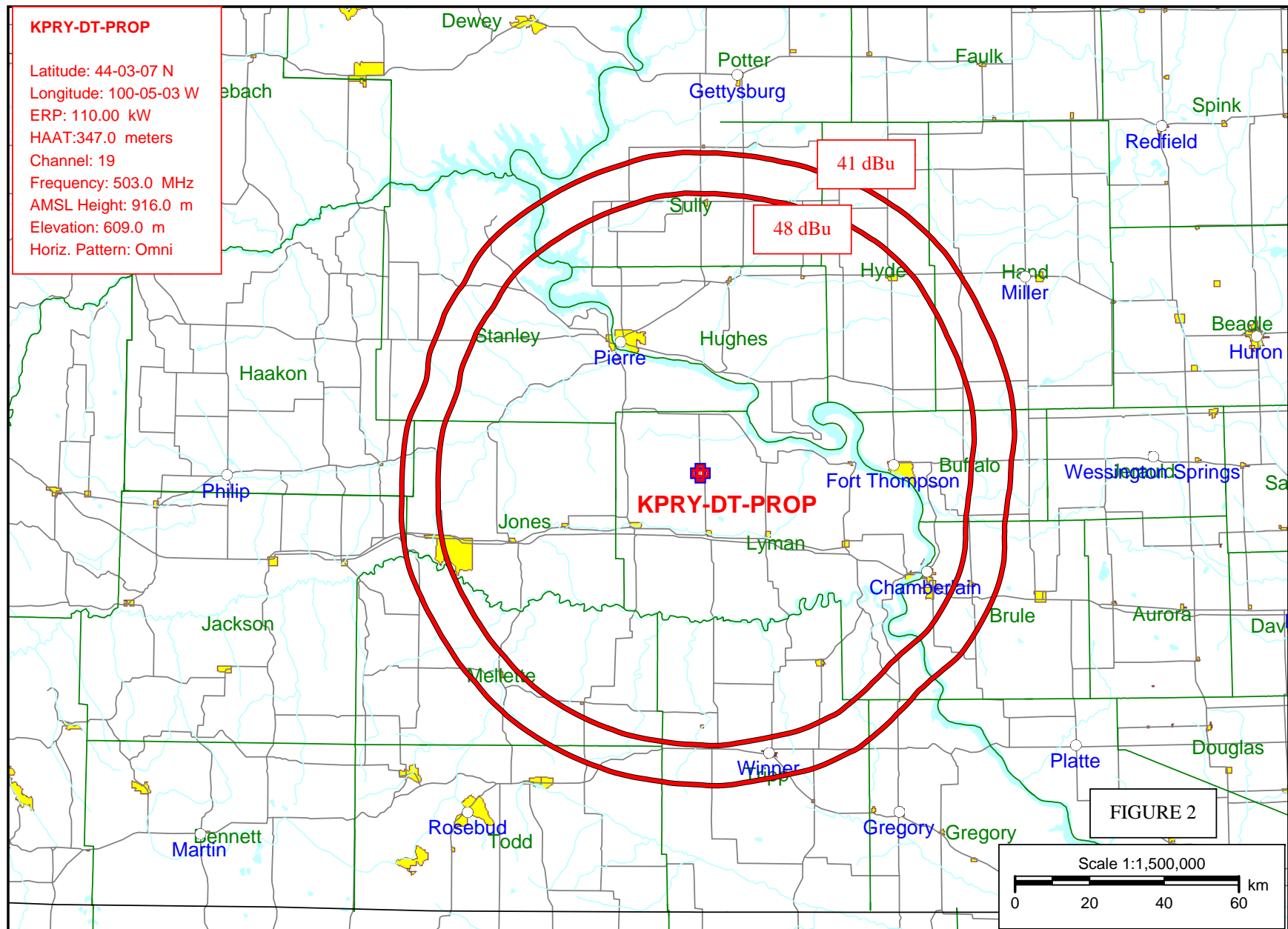
The Commission's guidelines for the Channel 19 TV are $1,666 \mu\text{W}/\text{cm}^2$ for the occupational/controlled, and $333 \mu\text{W}/\text{cm}^2$ for the general population/uncontrolled environment.

The above analysis indicates that members of the public and personnel working around the KPRY-DT tower would not be exposed to RF fields exceeding the Commission's guidelines. With respect to work performed on the tower, KPRY-DT will establish procedures to ensure that workers are not exposed to RF fields above the Commission's guidelines, by reducing or turning off the power, as appropriate.

For the reasons stated above, it is believed this proposal complies with Section 1.1307(a) and (b) of the Commission's Rules; therefore, under Section 1.1306, it is categorically excluded from environmental processing.



COMPUTED NOISE LIMITED CONTOURS FOR THE PROPOSED AND APPENDIX B FACILITIES OF KPRY-DT



COMPUTED CONTOURS FOR THE PROPOSED DTV OPERATION OF KPRY-DT, PIERRE, SOUTH DAKOTA