

ENGINEERING STATEMENT  
IN SUPPORT OF AN APPLICATION FOR CONSTRUCTION PERMIT  
FOR THE PROPOSED DIGITAL TV OPERATION OF  
KABY-TV, ABERDEEN, SOUTH DAKOTA  
CHANNEL 9 19.4 KW 427 METERS  
MARCH 2008

This engineering statement has been prepared on behalf of Hoak Media of Dakota License, LLC, licensee of TV station KABY-TV, Aberdeen, South Dakota, in support of its application for a construction permit for post-transition digital TV (DTV) operation on Channel 9.

At present KABY-TV, Facility ID Number 48659, operates its analog TV facilities on Channel 9 (186-192 MHz) with 316 kW effective radiated power (ERP) and 427 meters antenna height above average terrain (HAAT) using a non-directional TV antenna. In the Seventh Report and Order (MB Docket No. 87-268) the Commission has allotted Channel 9 for the KABY-TV's post-transition DTV operation. KABY-TV is filing its application for a construction permit to operate following the DTV transition on DTV Channel 9 with 19.4 kW ERP and 427 meters HAAT using a non-directional TV antenna.

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

Name of the Licensee:	Hoak Media of Dakota License, LLC
Station Location:	SD-Aberdeen
Channel:	9
Hours of Operation:	Unlimited
Transmitter:	Type Accepted
Antenna Type:	RCA, TW-15A9
Beam Tilt:	0.5

Antenna Coordinates:	North Latitude:	45 deg	06 min	23 sec
	West Longitude:	97 deg	53 min	57 sec

Transmitter output power: As required to achieve authorized ERP

Maximum effective radiated power (Average):	19.4 kW
	12.88 dBk

Elevation of site above mean sea level:	539.3 meters
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Overall height of the tower above ground:	399.1 meters
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Height of radiation center above ground (meters):	383.4 meters
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Height of radiation center above mean sea level (meters):	922.7 meters
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Height of radiation center above average terrain (meters):	427 meters
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Antenna Structure Registration Number:	1041932
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**Response to questions for Post Transition Expedited Processing listed on the  
FCC Form 301, Section III-D-DTV Engineering**

**Question 1. (a)**

KABY-TV will operate its DTV operation on Channel 9 as established in 47 C.F.R.  
Section 73.622.

**Question 1. (d)**

KABY-TV is proposing to operate its post-transition facilities which are slightly  
different than established in Appendix B of the Seventh Report and Order (MB  
Docket No. 87-268). The minor difference is due to the use of a non-directional DTV  
antenna which is currently used for analog TV operation while the Appendix B  
facilities specify a directional DTV antenna and slightly different geographic  
coordinates. The proposed noise-limited service contour extends no more than 1.7

km in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket 87-268. In addition, an electromagnetic interference study conducted according to FCC OET Bulletin 69 indicates the proposed KABY-DT operation would not cause interference to other DTV stations above the levels specified in Appendix B. The attached Tables I and II show the results of these studies for the Appendix B and proposed KABY-DT facilities, respectively.

**Question 1. (e)**

The population within the proposed DTV service area would be 128,827 people which is 1.2% more than the predicted population (127,246)<sup>1</sup> defined in the new DTV Table Appendix B.

**Waiver Request for Questions 1. (d) and 1. (e)**

The proposed KABY-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 its analog TV antenna for its digital TV operation
2. The expansion in service area would be less than 5 miles in any direction than 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 KABY-DT operation on DTV Channel 9 will not cause more than 0.5% new interference to other stations.

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<sup>1</sup> The estimated population figures listed in Appendix B are rounded to the nearest thousand. The indicated population figure is without rounding and is calculated according to the FCC OET Bulletin 69 procedure.

**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 KABY-DT contour will encompass the allotted principal community of Aberdeen, South Dakota.

**Question 4.**

The proposed KABY-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 KABY-DT tower is registered (ASR No. 1041932) by the Commission and no changes are proposed to require a change in the registration.

TABLE I

## OET BULLETIN 69 INTERFERENCE STUDY

Census data selected 2000

Post Transition Data Base Selected  
/space/software/cdbs/tvdb.sff\_B  
TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 03-18-2008 Time: 09:28:16

Record Selected for Analysis

KABY-TV USERRECORD-01 ABERDEEN SD US  
Channel 09 ERP 19.4 kW HAAT 427. m RCAMSL 00927 m  
Latitude 045-06-32 Longitude 0097-53-30  
Status APP Zone 2 Border  
Dir Antenna Make CDB Model 00000000074475 Beam tilt N Ref Azimuth 0.  
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	15.784	368.0	101.1
45.0	16.171	383.6	102.4
90.0	16.030	377.9	102.0
135.0	16.207	380.7	102.2
180.0	17.582	435.7	107.1
225.0	19.033	494.0	112.1
270.0	19.400	501.8	112.7
315.0	18.404	476.5	110.7

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete  
SPACING VIOLATION FOUND BETWEEN STATION

KABY-TV 09 ABERDEEN SD USERRECORD01

and station

SHORT TO: KESD-TV 08 BROOKINGS SD BFCET 20050812AAZ  
044-20-16 0097-13-42  
Req. separation => 23.0 <= 110.0 Actual separation 100.5 Short 9.5( 77.5) km

SHORT TO: KABY-TV 09 ABERDEEN SD BDTV 00000049  
45-06-32 97-53-30  
Req. separation 273.6 Actual separation 0.0 Short 273.6 km

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

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Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
09	KABY-TV	ABERDEEN SD	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
08	KESD-TV	BROOKINGS SD	100.4	CP	BFCRET	-20050812AAZ
09	KCAU-TV	SIOUX CITY IA	310.3	CP	BDTV	-00000051
09	KAWB	BEMIDJI MN	388.6	CP	BDTV	-00000045
09	KMSP-TV	MINNEAPOLIS MN	374.1	CP	BDTV	-00000048
09	KDSE	DICKINSON ND	427.9	CP	BDTV	-00000046
10	KWCM-TV	APPLETON MN	148.4	CP	BPEDT	-20000501AIK
10	KTSD-TV	PIERRE SD	185.6	CP	BDTV	-00000068

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Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
08	KESD-TV	BROOKINGS SD	BFCRET	-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	WDAZ-TV	DEVILS LAKE ND	426.7	CP	BDTV	-00000039
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	APP	USERRECORD-01	

Total scenarios = 1

Result key: 1  
 Scenario 1 Affected station 1  
 Before Analysis

Results for: 8A SD BROOKINGS BFCRET 20050812AAZ CP  
 HAAT 230.0 m, ATV ERP 9.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	133152	21646.1
not affected by terrain losses	128307	20549.7
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2772	173.3
lost to ATV IX only	2772	173.3
lost to all IX	2772	173.3

Potential Interfering Stations Included in above Scenario 1

7A SD SIOUX FALLS BPCDT 19991029ACY CP

After Analysis

Results for: 8A SD BROOKINGS BFCRET 20050812AAZ CP  
 HAAT 230.0 m, ATV ERP 9.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	133152	21646.1
not affected by terrain losses	128307	20549.7
lost to NTSC IX	0	0.0
lost to additional IX by ATV	5286	1048.0

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lost to ATV IX only	5286	1048.0
lost to all IX	5286	1048.0

Potential Interfering Stations Included in above Scenario 1

7A SD SIOUX FALLS	BPCDT	19991029ACY	CP
9A SD ABERDEEN	USERRECORD01		APP

Percent new IX = 2.0026%

Worst case new IX 2.0026% Scenario 1

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Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
09	KCAU-TV	SIOUX CITY IA	BDTV	-00000051

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
08	KLKN	LINCOLN NE	209.2	CP	BDTV	-00000033
08	KESD-TV	BROOKINGS SD	210.6	CP	BFCET	-20050812AAZ
09	KCRG-TV	CEDAR RAPIDS IA	359.9	CP	BDTV	-00000057
09	KMSP-TV	MINNEAPOLIS MN	370.9	CP	BDTV	-00000048
09	KMBC-TV	KANSAS CITY MO	415.2	LIC	BLCDT	-20020424AAP
10	KOLN	LINCOLN NE	213.3	CP	BDTV	-00000070
09	KABY-TV	ABERDEEN SD	310.3	APP	USERRECORD-01	

Total scenarios = 1

Result key: 2

Scenario 1 Affected station 2

Before Analysis

Results for: 9A IA SIOUX CITY BDTV 00000051 CP

HAAT 616.0 m, ATV ERP 22.3 kW		
	POPULATION	AREA (sq km)
within Noise Limited Contour	665652	45505.5
not affected by terrain losses	649457	44810.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	1534	232.8
lost to ATV IX only	1534	232.8
lost to all IX	1534	232.8

Potential Interfering Stations Included in above Scenario 1

9A IA CEDAR RAPIDS	BDTV	00000057	CP
9A MN MINNEAPOLIS	BDTV	00000048	CP
9A MO KANSAS CITY	BLCDT	20020424AAP	LIC

After Analysis

Results for: 9A IA SIOUX CITY BDTV 00000051 CP

HAAT 616.0 m, ATV ERP 22.3 kW		
	POPULATION	AREA (sq km)
within Noise Limited Contour	665652	45505.5
not affected by terrain losses	649457	44810.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	9628	309.1
lost to ATV IX only	9628	309.1
lost to all IX	9628	309.1

Potential Interfering Stations Included in above Scenario 1

9A IA CEDAR RAPIDS	BDTV	00000057	CP
9A MN MINNEAPOLIS	BDTV	00000048	CP
9A MO KANSAS CITY	BLCDT	20020424AAP	LIC
9A SD ABERDEEN	USERRECORD01		APP



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Percent new IX = 1.2492%

Worst case new IX 1.2492% Scenario 1

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Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application Ref. No.
09	KAWF	BEMIDJI MN	BDTV -00000045

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
08	WDSE-TV	DULUTH MN	205.0	LIC	BLET -821108KP
09	KMSP-TV	MINNEAPOLIS MN	311.7	CP	BDTV -00000048
10	WDIO-TV	DULUTH MN	205.3	CP	BPCDT -19991027ABA
10	KBRR	THIEF RIVER FALLS MN	144.8	CP	BPCDT -19991028AAV
09	KABY-TV	ABERDEEN SD	388.6	APP	USERRECORD-01

Proposal causes no interference

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Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application Ref. No.
09	KMSP-TV	MINNEAPOLIS MN	BDTV -00000048

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
08	WDSE-TV	DULUTH MN	207.7	LIC	BLET -821108KP
08	WKBTV	LA CROSSE WI	177.7	CP MOD	BMPCDT -20040812AAY
09	KCRG-TV	CEDAR RAPIDS IA	321.3	CP	BDTV -00000057
09	KCAU-TV	SIOUX CITY IA	370.9	CP	BDTV -00000051
09	KAWF	BEMIDJI MN	311.7	CP	BDTV -00000045
09	WAOW-TV	WAUSAU WI	270.2	CP	BDTV -00000050
10	KWCM-TV	APPLETON MN	225.9	CP	BPEDT -20000501AIK
10	WDIO-TV	DULUTH MN	207.2	CP	BPCDT -19991027ABA
10	KTTC	ROCHESTER MN	174.4	CP	BDTV -00000074
09	KABY-TV	ABERDEEN SD	374.1	APP	USERRECORD-01

Proposal causes no interference

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Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application Ref. No.
09	KDSE	DICKINSON ND	BDTV -00000046

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
08	KUMV-TV	WILLISTON ND	171.8	CP	BDTV -00000036
10	KXGN-TV	GLENDIVE MT	138.8	CP	BPRM -20000418AAC
10	KMOT	MINOT ND	204.5	LIC	BLCT -1851
09	KABY-TV	ABERDEEN SD	427.9	APP	USERRECORD-01

Proposal causes no interference

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## Analysis of Interference to Affected Station 6

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
10	KWCM-TV	APPLETON MN	BPEDT	-20000501AIK

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
09	KMSP-TV	MINNEAPOLIS MN	225.9	CP	BDTV	-00000048
10	WDIO-TV	DULUTH MN	349.4	CP	BPCDT	-19991027ABA
10	KTTC	ROCHESTER MN	334.8	CP	BDTV	-00000074
10	KBRR	THIEF RIVER FALLS MN	318.5	CP	BPCDT	-19991028AAV
10	KTSB-TV	PIERRE SD	314.7	CP	BDTV	-00000068
11	KARE	MINNEAPOLIS MN	224.7	LIC	BLCDT	-20010917ABZ
11	KELO-TV	SIOUX FALLS SD	188.1	LIC	BLCDT	-20030417AAE
09	KABY-TV	ABERDEEN SD	148.4	APP	USERRECORD-01	

Total scenarios = 1

Result key: 3  
 Scenario 1 Affected station 6  
 Before Analysis

Results for: 10A MN APPLETON BPEDT 20000501AIK CP  
 HAAT 364.0 m, ATV ERP 24.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	221320	29453.8
not affected by terrain losses	220106	29192.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	873	196.9
lost to ATV IX only	873	196.9
lost to all IX	873	196.9

Potential Interfering Stations Included in above Scenario 1

10A MN DULUTH	BPCDT	19991027ABA	CP
10A MN ROCHESTER	BDTV	00000074	CP
10A MN THIEF RIVER FALLS	BPCDT	19991028AAV	CP
10A SD PIERRE	BDTV	00000068	CP

## After Analysis

Results for: 10A MN APPLETON BPEDT 20000501AIK CP  
 HAAT 364.0 m, ATV ERP 24.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	221320	29453.8
not affected by terrain losses	220106	29192.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	873	196.9
lost to ATV IX only	873	196.9
lost to all IX	873	196.9

Potential Interfering Stations Included in above Scenario 1

10A MN DULUTH	BPCDT	19991027ABA	CP
10A MN ROCHESTER	BDTV	00000074	CP
10A MN THIEF RIVER FALLS	BPCDT	19991028AAV	CP
10A SD PIERRE	BDTV	00000068	CP
9A SD ABERDEEN	USERRECORD01		APP

Percent new IX = 0.0000%

Worst case new IX 0.0000% Scenario 1

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## Analysis of Interference to Affected Station 7

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
10	KTSD-TV	PIERRE SD	BDTV	-00000068

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
10	KWCM-TV	APPLETON MN	314.7	CP	BPEDT	-20000501AIK
10	KOLN	LINCOLN NE	403.8	CP	BDTV	-00000070
10	KHSD-TV	LEAD SD	340.3	CP	BPCDT	-20010529ACO
11	KQSD-TV	LOWRY SD	148.9	CP	BDTV	-00000083
09	KABY-TV	ABERDEEN SD	185.6	APP	USERRECORD-01	

Total scenarios = 1

Result key: 4  
 Scenario 1 Affected station 7  
 Before Analysis

Results for: 10A SD PIERRE BDTV 00000068 CP  
 HAAT 488.0 m, ATV ERP 21.4 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	63448	39456.2
not affected by terrain losses	62951	38324.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	816	569.9
lost to ATV IX only	816	569.9
lost to all IX	816	569.9

Potential Interfering Stations Included in above Scenario 1

10A MN APPLETON	BPEDT	20000501AIK	CP
10A NE LINCOLN	BDTV	00000070	CP
10A SD LEAD	BPCDT	20010529ACO	CP

## After Analysis

Results for: 10A SD PIERRE BDTV 00000068 CP  
 HAAT 488.0 m, ATV ERP 21.4 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	63448	39456.2
not affected by terrain losses	62951	38324.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	825	589.9
lost to ATV IX only	825	589.9
lost to all IX	825	589.9

Potential Interfering Stations Included in above Scenario 1

10A MN APPLETON	BPEDT	20000501AIK	CP
10A NE LINCOLN	BDTV	00000070	CP
10A SD LEAD	BPCDT	20010529ACO	CP
9A SD ABERDEEN	USERRECORD01		APP

Percent new IX = 0.0145%

Worst case new IX 0.0145% Scenario 1

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## Analysis of Interference to Affected Station 8

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
09	KABY-TV	ABERDEEN SD	USERRECORD-01	

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
08	KESD-TV	BROOKINGS SD	100.4	CP	BFCET	-20050812AAZ
09	KCAU-TV	SIOUX CITY IA	310.3	CP	BDTV	-00000051
09	KAWB	BEMIDJI MN	388.6	CP	BDTV	-00000045
09	KMSP-TV	MINNEAPOLIS MN	374.1	CP	BDTV	-00000048
09	KDSE	DICKINSON ND	427.9	CP	BDTV	-00000046
10	KWCM-TV	APPLETON MN	148.4	CP	BPEDT	-20000501AIK
10	KTSD-TV	PIERRE SD	185.6	CP	BDTV	-00000068

Total scenarios = 1

Result key: 5  
 Scenario 1 Affected station 8  
 Before Analysis

Results for: 9A SD ABERDEEN USERRECORD01 APP  
 HAAT 427.0 m, ATV ERP 19.4 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	137231	35576.7
not affected by terrain losses	131281	34176.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	3542	885.5
lost to ATV IX only	3542	885.5
lost to all IX	3542	885.5

Potential Interfering Stations Included in above Scenario 1

8A SD BROOKINGS	BFCET	20050812AAZ	CP
9A IA SIOUX CITY	BDTV	00000051	CP
9A MN BEMIDJI	BDTV	00000045	CP
9A MN MINNEAPOLIS	BDTV	00000048	CP

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FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

TABLE II

## OET BULLETIN 69 INTERFERENCE STUDY

Census data selected 2000

Post Transition Data Base Selected

/space/software/cdbs/tvdb.sff\_B

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 03-17-2008 Time: 14:24:40

Record Selected for Analysis

KABY-TV USERRECORD-01 ABERDEEN SD US  
 Channel 09 ERP 19.4 kW HAAT 427. m RCAMSL 00923 m  
 Latitude 045-06-23 Longitude 0097-53-57  
 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	19.400	368.0	102.8
45.0	19.400	378.8	103.6
90.0	19.400	375.3	103.3
135.0	19.400	373.8	103.2
180.0	19.400	446.4	108.9
225.0	19.400	492.6	112.2
270.0	19.400	501.6	112.7
315.0	19.400	481.8	111.5

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

KABY-TV 09 ABERDEEN SD USERRECORD01

and station

SHORT TO: KESD-TV 08 BROOKINGS SD BFCET 20050812AAZ  
 044-20-16 0097-13-42

Req. separation => 23.0 <= 110.0 Actual separation 100.6 Short 9.4( 77.6) km

SHORT TO: KABY-TV 09 ABERDEEN SD BDTV 00000049  
 45-06-32 97-53-30

Req. separation 273.6 Actual separation 0.7 Short 272.9 km  
 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

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## Start of Interference Analysis

Proposed Station			
Channel	Call	City/State	ARN
09	KABY-TV	ABERDEEN SD	USERRECORD01

## Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
08	KESD-TV	BROOKINGS SD	100.5	CP	BFCRET	-20050812AAZ
09	KCAU-TV	SIOUX CITY IA	310.3	CP	BDTV	-00000051
09	KAWB	BEMIDJI MN	389.2	CP	BDTV	-00000045
09	KMSP-TV	MINNEAPOLIS MN	374.7	CP	BDTV	-00000048
09	KDSE	DICKINSON ND	427.5	CP	BDTV	-00000046
10	KWCM-TV	APPLETON MN	149.0	CP	BPEDT	-20000501AIK
10	KTSD-TV	PIERRE SD	185.0	CP	BDTV	-00000068

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## Analysis of Interference to Affected Station 1

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
08	KESD-TV	BROOKINGS SD	BFCRET	-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	WDAZ-TV	DEVILS LAKE ND	426.7	CP	BDTV	-00000039
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	100.5	APP	USERRECORD-01	

Total scenarios = 1

Result key: 1  
 Scenario 1 Affected station 1  
 Before Analysis

Results for: 8A SD BROOKINGS BFCRET 20050812AAZ CP  
 HAAT 230.0 m, ATV ERP 9.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	133152	21646.1
not affected by terrain losses	128307	20549.7
lost to NTSC IX	0	0.0
lost to additional IX by ATV	2772	173.3
lost to ATV IX only	2772	173.3
lost to all IX	2772	173.3

Potential Interfering Stations Included in above Scenario 1

7A SD SIOUX FALLS	BPCDT	19991029ACY	CP
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## After Analysis

Results for: 8A SD BROOKINGS BFCRET 20050812AAZ CP  
 HAAT 230.0 m, ATV ERP 9.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	133152	21646.1
not affected by terrain losses	128307	20549.7
lost to NTSC IX	0	0.0
lost to additional IX by ATV	5303	1080.3
lost to ATV IX only	5303	1080.3
lost to all IX	5303	1080.3

Potential Interfering Stations Included in above Scenario 1

7A SD SIOUX FALLS BPCDT 19991029ACY CP  
9A SD ABERDEEN USERRECORD01 APP

Percent new IX = 2.0162%

Worst case new IX 2.0162% Scenario 1

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Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
09	KCAU-TV	SIOUX CITY IA	BDTV	-00000051

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
08	KLKN	LINCOLN NE	209.2	CP	BDTV	-00000033
08	KESD-TV	BROOKINGS SD	210.6	CP	BFCET	-20050812AAZ
09	KCRG-TV	CEDAR RAPIDS IA	359.9	CP	BDTV	-00000057
09	KMSP-TV	MINNEAPOLIS MN	370.9	CP	BDTV	-00000048
09	KMBC-TV	KANSAS CITY MO	415.2	LIC	BLCDT	-20020424AAP
10	KOLN	LINCOLN NE	213.3	CP	BDTV	-00000070
09	KABY-TV	ABERDEEN SD	310.3	APP	USERRECORD-01	

Total scenarios = 1

Result key: 2  
Scenario 1 Affected station 2  
Before Analysis

Results for: 9A IA SIOUX CITY BDTV 00000051 CP  
HAAT 616.0 m, ATV ERP 22.3 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	665652	45505.5
not affected by terrain losses	649457	44810.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	1534	232.8
lost to ATV IX only	1534	232.8
lost to all IX	1534	232.8

Potential Interfering Stations Included in above Scenario 1

9A IA CEDAR RAPIDS BDTV 00000057 CP  
9A MN MINNEAPOLIS BDTV 00000048 CP  
9A MO KANSAS CITY BLCDT 20020424AAP LIC

After Analysis

Results for: 9A IA SIOUX CITY BDTV 00000051 CP  
HAAT 616.0 m, ATV ERP 22.3 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	665652	45505.5
not affected by terrain losses	649457	44810.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	9614	305.1
lost to ATV IX only	9614	305.1
lost to all IX	9614	305.1

Potential Interfering Stations Included in above Scenario 1

9A IA CEDAR RAPIDS BDTV 00000057 CP  
9A MN MINNEAPOLIS BDTV 00000048 CP  
9A MO KANSAS CITY BLCDT 20020424AAP LIC  
9A SD ABERDEEN USERRECORD01 APP

Percent new IX = 1.2471%

Worst case new IX 1.2471% Scenario 1  
 #####  
 Analysis of Interference to Affected Station 3

Analysis of current record  

Channel	Call	City/State	Application	Ref. No.
09	KAWF	BEMIDJI MN	BDTV	-00000045

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
08	WDSE-TV	DULUTH MN	205.0	LIC	BLET	-821108KP
09	KMSP-TV	MINNEAPOLIS MN	311.7	CP	BDTV	-00000048
10	WDIO-TV	DULUTH MN	205.3	CP	BPCDT	-19991027ABA
10	KBRR	THIEF RIVER FALLS MN	144.8	CP	BPCDT	-19991028AAV
09	KABY-TV	ABERDEEN SD	389.2	APP	USERRECORD-01	

Proposal causes no interference

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 Analysis of Interference to Affected Station 4

Analysis of current record  

Channel	Call	City/State	Application	Ref. No.
09	KMSP-TV	MINNEAPOLIS MN	BDTV	-00000048

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
08	WDSE-TV	DULUTH MN	207.7	LIC	BLET	-821108KP
08	WKBT	LA CROSSE WI	177.7	CP MOD	BMPCDT	-20040812AAY
09	KCRG-TV	CEDAR RAPIDS IA	321.3	CP	BDTV	-00000057
09	KCAU-TV	SIOUX CITY IA	370.9	CP	BDTV	-00000051
09	KAWF	BEMIDJI MN	311.7	CP	BDTV	-00000045
09	WAOW-TV	WAUSAU WI	270.2	CP	BDTV	-00000050
10	KWCM-TV	APPLETON MN	225.9	CP	BPEDT	-20000501AIK
10	WDIO-TV	DULUTH MN	207.2	CP	BPCDT	-19991027ABA
10	KTTC	ROCHESTER MN	174.4	CP	BDTV	-00000074
09	KABY-TV	ABERDEEN SD	374.7	APP	USERRECORD-01	

Proposal causes no interference

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 Analysis of Interference to Affected Station 5

Analysis of current record  

Channel	Call	City/State	Application	Ref. No.
09	KDSE	DICKINSON ND	BDTV	-00000046

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
08	KUMV-TV	WILLISTON ND	171.8	CP	BDTV	-00000036
10	KXGN-TV	GLENDIVE MT	138.8	CP	BPRM	-20000418AAC
10	KMOT	MINOT ND	204.5	LIC	BLCT	-1851
09	KABY-TV	ABERDEEN SD	427.5	APP	USERRECORD-01	

Proposal causes no interference

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 Analysis of Interference to Affected Station 6

Analysis of current record  

Channel	Call	City/State	Application	Ref. No.
10	KWCM-TV	APPLETON MN	BPEDT	-20000501AIK

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
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09	KMSP-TV	MINNEAPOLIS MN	225.9	CP	BDTV	-00000048
10	WDIO-TV	DULUTH MN	349.4	CP	BPCDT	-19991027ABA
10	K TTC	ROCHESTER MN	334.8	CP	BDTV	-00000074
10	KBRR	THIEF RIVER FALLS MN	318.5	CP	BPCDT	-19991028AAV
10	KTSD-TV	PIERRE SD	314.7	CP	BDTV	-00000068
11	KARE	MINNEAPOLIS MN	224.7	LIC	BLCDT	-20010917ABZ
11	KELO-TV	SIOUX FALLS SD	188.1	LIC	BLCDT	-20030417AAE
09	KABY-TV	ABERDEEN SD	149.0	APP	USERRECORD-01	

Total scenarios = 1

Result key: 3  
 Scenario 1 Affected station 6  
 Before Analysis

Results for: 10A MN APPLETON BPEDT 20000501AIK CP  
 HAAT 364.0 m, ATV ERP 24.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	221320	29453.8
not affected by terrain losses	220106	29192.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	873	196.9
lost to ATV IX only	873	196.9
lost to all IX	873	196.9

Potential Interfering Stations Included in above Scenario 1

10A MN DULUTH	BPCDT	19991027ABA	CP
10A MN ROCHESTER	BDTV	00000074	CP
10A MN THIEF RIVER FALLS	BPCDT	19991028AAV	CP
10A SD PIERRE	BDTV	00000068	CP

After Analysis

Results for: 10A MN APPLETON BPEDT 20000501AIK CP  
 HAAT 364.0 m, ATV ERP 24.2 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	221320	29453.8
not affected by terrain losses	220106	29192.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	875	205.0
lost to ATV IX only	875	205.0
lost to all IX	875	205.0

Potential Interfering Stations Included in above Scenario 1

10A MN DULUTH	BPCDT	19991027ABA	CP
10A MN ROCHESTER	BDTV	00000074	CP
10A MN THIEF RIVER FALLS	BPCDT	19991028AAV	CP
10A SD PIERRE	BDTV	00000068	CP
9A SD ABERDEEN	USERRECORD01		APP

Percent new IX = 0.0009%

Worst case new IX 0.0009% Scenario 1

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Analysis of Interference to Affected Station 7

Analysis of current record

Channel	Call	City/State	Application Ref. No.
10	KTSD-TV	PIERRE SD	BDTV -00000068

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
10	KWCM-TV	APPLETON MN	314.7	CP	BPEDT -20000501AIK
10	KOLN	LINCOLN NE	403.8	CP	BDTV -00000070
10	KHSD-TV	LEAD SD	340.3	CP	BPCDT -20010529ACO

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11	KQSD-TV LOWRY SD	148.9	CP	BDTV	-00000083
09	KABY-TV ABERDEEN SD	185.0	APP	USERRECORD-01	

Total scenarios = 1

Result key: 4  
 Scenario 1 Affected station 7  
 Before Analysis

Results for: 10A SD PIERRE	BDTV	00000068	CP
HAAT 488.0 m, ATV ERP 21.4 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	63448	39456.2	
not affected by terrain losses	62951	38324.5	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	816	569.9	
lost to ATV IX only	816	569.9	
lost to all IX	816	569.9	

Potential Interfering Stations Included in above Scenario 1

10A MN APPLETON	BPEDT	20000501AIK	CP
10A NE LINCOLN	BDTV	00000070	CP
10A SD LEAD	BPCDT	20010529ACO	CP

After Analysis

Results for: 10A SD PIERRE	BDTV	00000068	CP
HAAT 488.0 m, ATV ERP 21.4 kW			
	POPULATION	AREA (sq km)	
within Noise Limited Contour	63448	39456.2	
not affected by terrain losses	62951	38324.5	
lost to NTSC IX	0	0.0	
lost to additional IX by ATV	817	589.9	
lost to ATV IX only	817	589.9	
lost to all IX	817	589.9	

Potential Interfering Stations Included in above Scenario 1

10A MN APPLETON	BPEDT	20000501AIK	CP
10A NE LINCOLN	BDTV	00000070	CP
10A SD LEAD	BPCDT	20010529ACO	CP
9A SD ABERDEEN	USERRECORD01		APP

Percent new IX = 0.0016%

Worst case new IX 0.0016% Scenario 1

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Analysis of Interference to Affected Station 8

Analysis of current record

Channel	Call	City/State	Application Ref. No.
09	KABY-TV	ABERDEEN SD	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
08	KESD-TV	BROOKINGS SD	100.5	CP	BFR CET -20050812AAZ
09	KCAU-TV	SIOUX CITY IA	310.3	CP	BDTV -00000051
09	KAWB	BEMIDJI MN	389.2	CP	BDTV -00000045
09	KMSP-TV	MINNEAPOLIS MN	374.7	CP	BDTV -00000048
09	KDSE	DICKINSON ND	427.5	CP	BDTV -00000046
10	KWCM-TV	APPLETON MN	149.0	CP	BPEDT -20000501AIK
10	KTSD-TV	PIERRE SD	185.0	CP	BDTV -00000068

Total scenarios = 1

Result key: 5

Scenario 1 Affected station 8  
Before Analysis

Results for: 9A SD ABERDEEN USERRECORD01 APP  
HAAT 427.0 m, ATV ERP 19.4 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	139305	36202.3
not affected by terrain losses	132660	34753.3
lost to NTSC IX	0	0.0
lost to additional IX by ATV	3833	893.6
lost to ATV IX only	3833	893.6
lost to all IX	3833	893.6

Potential Interfering Stations Included in above Scenario 1

8A SD BROOKINGS	BFCET	20050812AAZ	CP
9A IA SIOUX CITY	BDTV	00000051	CP
9A MN BEMIDJI	BDTV	00000045	CP
9A MN MINNEAPOLIS	BDTV	00000048	CP

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## **ENVIRONMENTAL PROTECTION ACT**

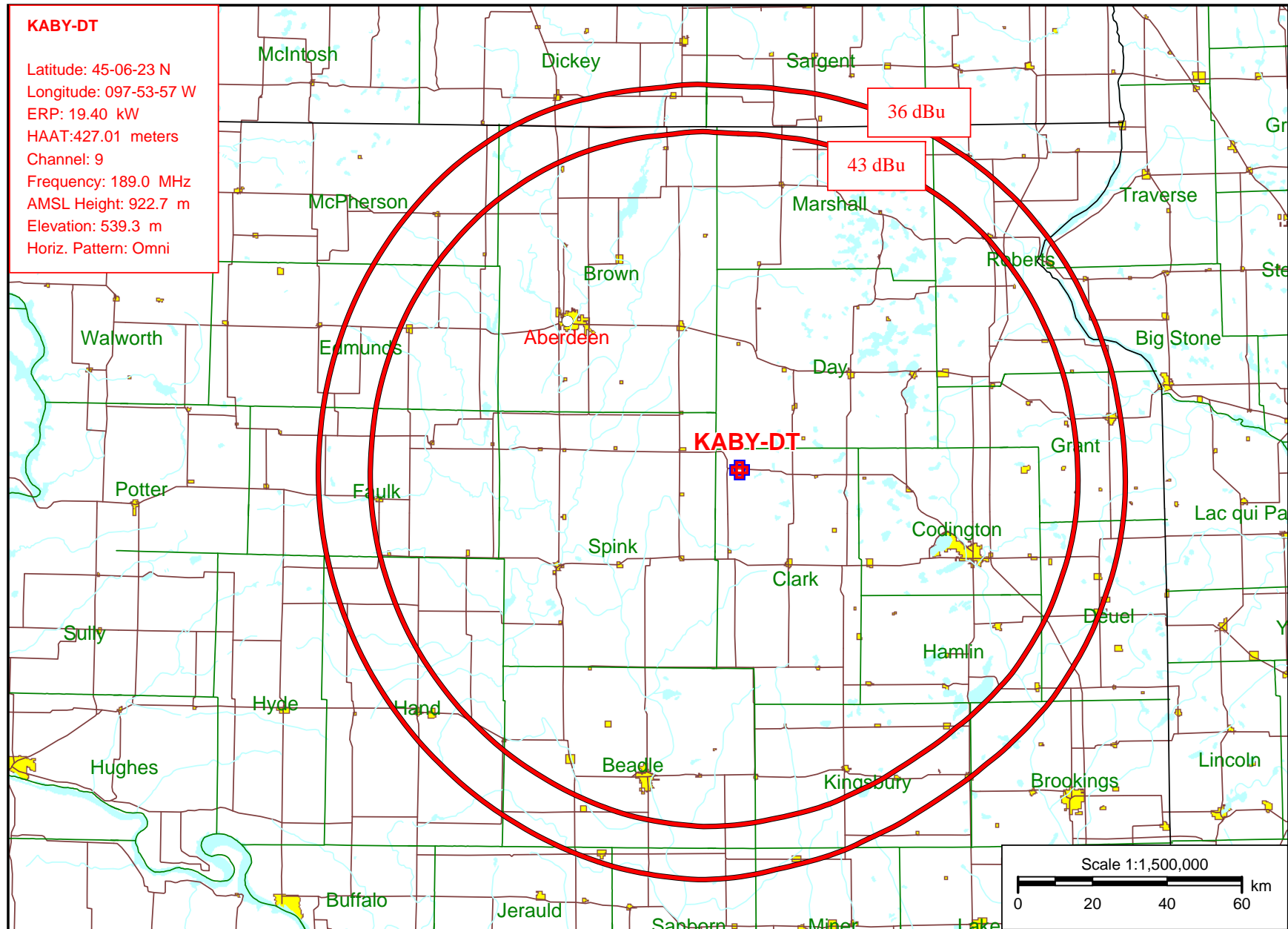
Since KABY-TV will be using its currently licensed analog TV antenna, located on tower (ASR No. 1041932), for the DTV operation the environmental concerns listed in Section 1.1307(a) of the Commission's rules are not pertinent; therefore, those issues have not been addressed.

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 19.4 kW and a radiation center of 383.4 meters above ground level, the proposed Channel 9 DTV operation would have less than 2 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 0.5 in the downward direction.

The Commission's guidelines for the Channel 10 TV are  $1000 \mu\text{W}/\text{cm}^2$  for the occupational/controlled, and  $200 \mu\text{W}/\text{cm}^2$  for the general population/uncontrolled environment.

The above analysis indicates that members of the public and personnel working around the KABY-DT tower would not be exposed to RF fields exceeding the Commission's guidelines. With respect to work performed on the tower, KABY-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 DTV OPERATION OF KABY-DT, ABERDEEN, SOUTH DAKOTA