

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 06-10-2008 Time: 15:51:32

Record Selected for Analysis

KTSD-D.C USERRECORD-01 PIERRE SD US  
Channel 10 ERP 57.6 kW HAAT 487. m RCAMSL 01012 m  
Latitude 043-58-05 Longitude 0099-35-40  
Status APP Zone 2 Border  
Dir Antenna Make usr Model USRPAT01 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 does not meet maximum height/power limits

Channel 10 ERP = 57.60 HAAT = 487.

Azimuth (Deg)	ERP (kW)	HAAT (m)	36.0 dBu F(50,90) (km)
0.0	57.600	510.9	123.5
45.0	57.600	542.8	125.6
90.0	57.600	477.6	121.7
135.0	57.600	466.9	121.0
180.0	57.600	464.7	120.9
225.0	57.600	463.0	120.7
270.0	57.600	489.1	122.3
315.0	57.600	484.0	122.0

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

KTSD-D.C 10 PIERRE SD USERRECORD01

and station

SHORT TO: KTSD-TV 10 PIERRE SD BDTV 1428  
43 -57-55 099 -35-56

Req. separation 273.6 Actual separation 0.5 Short 273.1 km

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quite 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
10	KTSD-D.C	PIERRE SD	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan No.	Call	City/State	Dist(km)	Status	Application	Ref.
09	KABY-TV	ABERDEEN SD	185.1	LIC	BDTV	-1417
10	KWCM-TV	APPLETON MN	314.2	LIC	BDTV	-0816
10	KOLN	LINCOLN NE	403.8	LIC	BDTV	-1029
10	KHSD-TV	LEAD SD	340.6	LIC	BDTV	-1424
11	KQSD-TV	LOWRY SD	148.6	LIC	BDTV	-1425
10	KOLN-D.C	LINCOLN NE	403.7	APP	USERRECORD-02	
09	KABY-D.C	ABERDEEN SD	184.5	APP	USERRECORD-04	
11	KQSD-D.C	LOWRY SD	148.8	APP	USERRECORD-05	

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Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
09	KABY-TV	ABERDEEN SD	BDTV	-1417

Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application	Ref.
08	KESD-TV	BROOKINGS SD	100.4	LIC	BDTV	-1419
09	KCAU-TV	SIOUX CITY IA	310.3	LIC	BDTV	-0484
09	KAWB	BEMIDJI MN	388.6	LIC	BDTV	-0819
09	KMSP-TV	MINNEAPOLIS MN	374.1	LIC	BDTV	-0832
09	KDSE	DICKINSON ND	427.9	LIC	BDTV	-0999
10	KWCM-TV	APPLETON MN	148.4	LIC	BDTV	-0816
10	KTSD-D.C	PIERRE SD	185.1	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.
10	KWCM-TV	APPLETON MN	BDTV	-0816

Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application	Ref.
09	KMSP-TV	MINNEAPOLIS MN	225.9	LIC	BDTV	-0832
09	KABY-TV	ABERDEEN SD	148.4	LIC	BDTV	-1417
10	WDIO-TV	DULUTH MN	349.5	LIC	BDTV	-0825
10	KTTC	ROCHESTER MN	334.8	LIC	BDTV	-0839
10	KBRR	THIEF RIVER FALLS MN	318.5	LIC	BDTV	-0845
11	KARE	MINNEAPOLIS MN	224.7	LIC	BDTV	-0833
11	KELO-TV	SIOUX FALLS SD	188.1	LIC	BDTV	-1437
10	KTSD-D.C	PIERRE SD	314.2	APP	USERRECORD-01	
09	KABY-D.C	ABERDEEN SD	149.0	APP	USERRECORD-04	

Total scenarios = 2

Result key: 1  
Scenario 1 Affected station 2  
Before Analysis

Results for: 10A MN APPLETON BDTV 0816 LIC  
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	460	72.3
lost to ATV IX only	460	72.3
lost to all IX	460	72.3

Potential Interfering Stations Included in above Scenario 1

9A SD ABERDEEN	BDTV	1417	LIC
10A MN DULUTH	BDTV	0825	LIC
10A MN ROCHESTER	BDTV	0839	LIC
10A MN THIEF RIVER FALLS	BDTV	0845	LIC

After Analysis

Results for: 10A MN APPLETON BDTV 0816 LIC  
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	1313	309.5
lost to ATV IX only	1313	309.5
lost to all IX	1313	309.5

Potential Interfering Stations Included in above Scenario 1

9A SD ABERDEEN	BDTV	1417	LIC	
10A MN DULUTH	BDTV	0825	LIC	
10A MN ROCHESTER	BDTV	0839	LIC	
10A MN THIEF RIVER FALLS	BDTV	0845	LIC	
10A SD PIERRE	USERRECORD01		APP	
*Percent Service lost without proposal:		0.0	to BDTV	0816
*Percent Service lost with proposal:		0.4	to BDTV	0816

Result key: 2  
 Scenario 2 Affected station 2  
 Before Analysis

Results for: 10A MN APPLETON	BDTV	0816	LIC
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	462	84.4	
lost to ATV IX only	462	84.4	
lost to all IX	462	84.4	

Potential Interfering Stations Included in above Scenario 2

9A SD ABERDEEN	USERRECORD04	APP
10A MN DULUTH	BDTV	0825
10A MN ROCHESTER	BDTV	0839
10A MN THIEF RIVER FALLS	BDTV	0845

After Analysis

Results for: 10A MN APPLETON	BDTV	0816	LIC
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	1313	313.5	
lost to ATV IX only	1313	313.5	
lost to all IX	1313	313.5	

Potential Interfering Stations Included in above Scenario 2

9A SD ABERDEEN	USERRECORD04	APP	
10A MN DULUTH	BDTV	0825	
10A MN ROCHESTER	BDTV	0839	
10A MN THIEF RIVER FALLS	BDTV	0845	
10A SD PIERRE	USERRECORD01	APP	
*Percent Service lost without proposal:		0.0	to BDTV 0816
*Percent Service lost with proposal:		0.4	to BDTV 0816

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Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
10	KOLN	LINCOLN NE	BDTV	-1029

Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application	Ref.
09	KCAU-TV	SIOUX CITY IA	213.3	LIC	BDTV	-0484
10	KBSL-TV	GOODLAND KS	400.2	LIC	BDTV	-0609
10	KAKE-TV	WICHITA KS	337.0	LIC	BDTV	-0627
11	KTWU	TOPEKA KS	227.8	LIC	BDTV	-0622
11	KGIN	GRAND ISLAND NE	138.8	LIC	BDTV	-1021
10	KTSD-D.C	PIERRE SD	403.8	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.
10	KHSD-TV	LEAD SD	BDTV	-1424

Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application	Ref.
10	KTVQ	BILLINGS MT	396.5	LIC	BDTV	-0915
10	KXGN-TV	GLENDDIVE MT	310.1	LIC	BDTV	-0924
10	KFNE	RIVERTON WY	362.6	LIC	BDTV	-1808
10	KTSD-D.C	PIERRE SD	340.6	APP	USERRECORD-01	

Total scenarios = 1

Result key: 3

Scenario 1 Affected station 4

Before Analysis

Results for: 10A SD LEAD BDTV 1424 LIC

HAAT 576.0 m, ATV ERP 34.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	168924	47105.6
not affected by terrain losses	162058	44169.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	26	96.7
lost to ATV IX only	26	96.7
lost to all IX	26	96.7

Potential Interfering Stations Included in above Scenario 1

10A MT GLENDDIVE BDTV 0924 LIC

After Analysis

Results for: 10A SD LEAD BDTV 1424 LIC

HAAT 576.0 m, ATV ERP 34.8 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	168924	47105.6
not affected by terrain losses	162058	44169.6
lost to NTSC IX	0	0.0
lost to additional IX by ATV	65	237.6
lost to ATV IX only	65	237.6
lost to all IX	65	237.6

Potential Interfering Stations Included in above Scenario 1

10A MT GLENDIVE	BDTV	0924	LIC	
10A SD PIERRE	USERRECORD01		APP	
*Percent Service lost without proposal:	0.0	to BDTV		1424
*Percent Service lost with proposal:	0.0	to BDTV		1424

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#### Analysis of Interference to Affected Station 5

##### Analysis of current record

Channel	Call	City/State	Application	Ref. No.
11	KQSD-TV	LOWRY SD	BDTV	-1425

##### Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application	Ref.
11	KELO-TV	SIOUX FALLS SD	336.4	LIC	BDTV	-1437
12	KXMB-TV	BISMARCK ND	159.1	LIC	BDTV	-0991
12	KTTM	HURON SD	178.2	LIC	BDTV	-1422
10	KTSD-D.C	PIERRE SD	148.6	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	KOLN-D.C	LINCOLN NE	USERRECORD-02	

##### Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application	Ref.
09	KCAU-TV	SIOUX CITY IA	213.3	LIC	BDTV	-0484
10	KBSL-TV	GOODLAND KS	400.1	LIC	BDTV	-0609
10	KAKE-TV	WICHITA KS	337.1	LIC	BDTV	-0627
11	KTWU	TOPEKA KS	227.9	LIC	BDTV	-0622
11	KGIN	GRAND ISLAND NE	138.7	LIC	BDTV	-1021
10	KTSD-D.C	PIERRE SD	403.7	APP	USERRECORD-01	

Proposal causes no interference

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# Analysis of Interference to Affected Station 7

## Analysis of current record

Channel	Call	City/State	Application Ref. No.
09	KABY-D.C	ABERDEEN SD	USERRECORD-04

## Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application Ref.
08	KESD-TV	BROOKINGS SD	100.5	LIC	BDTV -1419
09	KCAU-TV	SIOUX CITY IA	310.3	LIC	BDTV -0484
09	Kawe	BEMIDJI MN	389.2	LIC	BDTV -0819
09	KMSP-TV	MINNEAPOLIS MN	374.7	LIC	BDTV -0832
09	KDSE	DICKINSON ND	427.5	LIC	BDTV -0999
10	KWCM-TV	APPLETON MN	149.0	LIC	BDTV -0816
10	KTSD-D.C	PIERRE SD	184.5	APP	USERRECORD-01

Proposal causes no interference

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# Analysis of Interference to Affected Station 8

## Analysis of current record

Channel	Call	City/State	Application Ref. No.
11	KQSD-D.C	LOWRY SD	USERRECORD-05

## Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application Ref.
11	KELO-TV	SIOUX FALLS SD	336.6	LIC	BDTV -1437
12	KXMB-TV	BISMARCK ND	158.9	LIC	BDTV -0991
12	KTTM	HURON SD	178.4	LIC	BDTV -1422
10	KTSD-D.C	PIERRE SD	148.8	APP	USERRECORD-01

Total scenarios = 1

Result key: 4

Scenario 1 Affected station 8  
Before Analysis

Results for: 11A SD LOWRY USERRECORD05 APP

HAAT 298.0 m, ATV ERP 40.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	37475	33568.0
not affected by terrain losses	36614	32910.1
lost to NTSC IX	0	0.0
lost to additional IX by ATV	37	152.4
lost to ATV IX only	37	152.4
lost to all IX	37	152.4

Potential Interfering Stations Included in above Scenario 1

11A SD SIOUX FALLS	BDTV	1437	LIC
12A ND BISMARCK	BDTV	0991	LIC

# After Analysis

Results for: 11A SD LOWRY                      USERRECORD05                      APP  
 HAAT 298.0 m, ATV ERP 40.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	37475	33568.0
not affected by terrain losses	36614	32910.1
lost to NTSC IX	0	0.0
lost to additional IX by ATV	103	324.9
lost to ATV IX only	103	324.9
lost to all IX	103	324.9

Potential Interfering Stations Included in above Scenario 1

11A SD SIOUX FALLS	BDTV	1437	LIC
12A ND BISMARCK	BDTV	0991	LIC
10A SD PIERRE	USERRECORD01		APP
*Percent Service lost without proposal:		0.0	to USERRECORD05
*Percent Service lost with proposal:		0.2	to USERRECORD05

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## Analysis of Interference to Affected Station 9

### Analysis of current record

Channel	Call	City/State	Application Ref. No.
10	KTSD-D.C	PIERRE SD	USERRECORD-01

### Stations Potentially Affecting This Station

Chan No.	Call	City/State	Dist(km)	Status	Application Ref.
09	KABY-TV	ABERDEEN SD	185.1	LIC	BDTV -1417
10	KWCM-TV	APPLETON MN	314.2	LIC	BDTV -0816
10	KOLN	LINCOLN NE	403.8	LIC	BDTV -1029
10	KHSD-TV	LEAD SD	340.6	LIC	BDTV -1424
11	KQSD-TV	LOWRY SD	148.6	LIC	BDTV -1425
10	KOLN-D.C	LINCOLN NE	403.7	APP	USERRECORD-02
09	KABY-D.C	ABERDEEN SD	184.5	APP	USERRECORD-04
11	KQSD-D.C	LOWRY SD	148.8	APP	USERRECORD-05

Total scenarios = 8

Result key: 5  
 Scenario 1 Affected station 9  
 Before Analysis

Results for: 10A SD PIERRE                      USERRECORD01                      APP  
 HAAT 487.0 m, ATV ERP 57.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	87706	46966.2
not affected by terrain losses	86066	45349.0
lost to NTSC IX	0	0.0



lost to additional IX by ATV	641	1063.4
lost to ATV IX only	641	1063.4
lost to all IX	641	1063.4

Potential Interfering Stations Included in above Scenario 1

9A SD ABERDEEN	BDTV	1417	LIC
10A MN APPLETON	BDTV	0816	LIC
10A NE LINCOLN	BDTV	1029	LIC
10A SD LEAD	BDTV	1424	LIC
11A SD LOWRY	BDTV	1425	LIC

Result key: 6  
 Scenario 2 Affected station 9  
 Before Analysis

Results for: 10A SD PIERRE USERRECORD01 APP  
 HAAT 487.0 m, ATV ERP 57.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	87706	46966.2
not affected by terrain losses	86066	45349.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	1664	1272.1
lost to ATV IX only	1664	1272.1
lost to all IX	1664	1272.1

Potential Interfering Stations Included in above Scenario 2

9A SD ABERDEEN	BDTV	1417	LIC
10A MN APPLETON	BDTV	0816	LIC
10A NE LINCOLN	BDTV	1029	LIC
10A SD LEAD	BDTV	1424	LIC
11A SD LOWRY	USERRECORD05		APP

Result key: 7  
 Scenario 3 Affected station 9  
 Before Analysis

Results for: 10A SD PIERRE USERRECORD01 APP  
 HAAT 487.0 m, ATV ERP 57.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	87706	46966.2
not affected by terrain losses	86066	45349.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	641	1067.4
lost to ATV IX only	641	1067.4
lost to all IX	641	1067.4

Potential Interfering Stations Included in above Scenario 3

9A SD ABERDEEN	BDTV	1417	LIC
10A MN APPLETON	BDTV	0816	LIC
10A NE LINCOLN	USERRECORD02		APP
10A SD LEAD	BDTV	1424	LIC
11A SD LOWRY	BDTV	1425	LIC

Result key: 8  
 Scenario 4 Affected station 9  
 Before Analysis

Results for: 10A SD PIERRE                      USERRECORD01                      APP  
 HAAT 487.0 m, ATV ERP 57.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	87706	46966.2
not affected by terrain losses	86066	45349.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	1664	1276.1
lost to ATV IX only	1664	1276.1
lost to all IX	1664	1276.1

Potential Interfering Stations Included in above Scenario                      4

9A SD ABERDEEN	BDTV	1417	LIC
10A MN APPLETON	BDTV	0816	LIC
10A NE LINCOLN	USERRECORD02		APP
10A SD LEAD	BDTV	1424	LIC
11A SD LOWRY	USERRECORD05		APP

Result key:                      9  
 Scenario                      5    Affected station                      9  
 Before Analysis

Results for: 10A SD PIERRE                      USERRECORD01                      APP  
 HAAT 487.0 m, ATV ERP 57.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	87706	46966.2
not affected by terrain losses	86066	45349.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	677	1083.5
lost to ATV IX only	677	1083.5
lost to all IX	677	1083.5

Potential Interfering Stations Included in above Scenario                      5

9A SD ABERDEEN	USERRECORD04		APP
10A MN APPLETON	BDTV	0816	LIC
10A NE LINCOLN	BDTV	1029	LIC
10A SD LEAD	BDTV	1424	LIC
11A SD LOWRY	BDTV	1425	LIC

Result key:                      10  
 Scenario                      6    Affected station                      9  
 Before Analysis

Results for: 10A SD PIERRE                      USERRECORD01                      APP  
 HAAT 487.0 m, ATV ERP 57.6 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	87706	46966.2
not affected by terrain losses	86066	45349.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	1700	1292.1
lost to ATV IX only	1700	1292.1
lost to all IX	1700	1292.1

Potential Interfering Stations Included in above Scenario                      6

9A SD ABERDEEN	USERRECORD04		APP
10A MN APPLETON	BDTV	0816	LIC
10A NE LINCOLN	BDTV	1029	LIC
10A SD LEAD	BDTV	1424	LIC

APP

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