APPLICATION FOR CONSTRUCTION PERMIT
DIGITAL FLASH CUT

KCPO-LP – SIOUX FALLS, SOUTH DAKOTA
FACILITY ID: 26041

G.I.G., INC.

MARCH 2020

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JEREMY RUCK & ASSOCIATES, INC.
P.O. Box 415
221 S. 1st Avenue
Canton, IL 61520
Tel: 309.647.1200
Fax: 855.332.9537
jeremyruck.com

APPLICATION FOR CONSTRUCTION PERMIT – DIGITAL FLASH CUT

The following engineering statement and attached exhibits have been prepared for **G.I.G., Inc.** ("GIG"), licensee of low power television station KCPO-LP at Sioux Falls, South Dakota, and are in support of their application for construction permit to flash cut that facility from analog to digital operations.[1] The current license for the facility is under FCC File No. BLTTL-2011029AAL. In addition to changing from analog to digital, this application proposes a short distance relocation of the transmitter site.

The licensed analog facility operates on television channel 26 with a maximum effective radiated power of 7.57 kW at a center of radiation of 494.5 meters above mean sea level, 36.7 meters above ground level, utilizing a non-directional antenna. The proposed digital flash cut facility would operate on television channel 26 with a maximum effective radiated power of 2.79 kW at a center of radiation of 494.5 meters above mean sea level, 37.3 meters above ground level. The antenna that is utilized at the current site, an Andrew ALP8M1-HSO-26, will be relocated to the proposed transmitter site.

Exhibit E-1 provides a service contour comparison between the proposed 51 dBu F(50,90) contour and the licensed 74 dBu F(50,50) contour. As this map demonstrates, the licensed service contour is wholly contained within the proposed service contour. Additionally, it can be inferred from this map that the two sites are located less than 30 miles apart.

Exhibit E-3 is the output from *TVStudy* for the proposed facility. This study demonstrates that there are no outgoing interference check failures to any proposed or authorized facility. This

[1] The Facility ID for KCPO-LP at Sioux Falls, South Dakota is 26041.

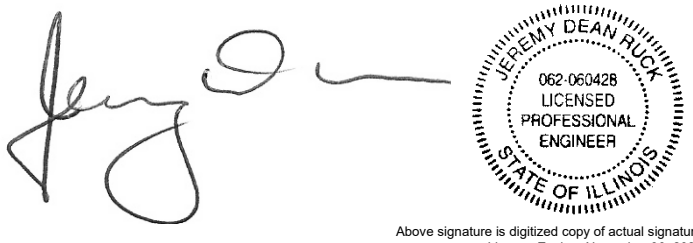
study was performed with a cell size of 0.5 kilometers, and a profile increment spacing of 0.1 kilometer.

The proposed facility would not constitute a significant environmental impact, and is exempt from environmental processing. The proposed antenna would be mounted to an existing tower that is registered with the Commission. The addition of the antenna to this tower would not increase the already existing environmental impact present from the tower.

In addition, the proposed facility would not result in human exposure at ground level to radiofrequency radiation in excess of the Commission's safety standards. Using the equations in Supplement A of *OET Bulletin 65*, the calculated worst-case power density at ground level assuming a downward radiation relative field of 0.3 is 6.73 $\mu W/cm^2$. This value is substantially below the upper limit of the uncontrolled environment condition. GIG certifies it will coordinate with all other users of the site to ensure that workers and other personnel are not exposed to levels of radiofrequency radiation in excess of the applicable safety standards. Coordination activities will include, but are not necessarily limited to, a reduction in transmitter power or cessation of operation.

The proposed facility complies with the provisions of Section 74.709 of the Commission's Rules. No land mobile protection issues have been identified based on the tables in that section of the rules, or on the output of *TVStudy*. The proposed facility also complies with Sections 74.793(e)-(h) and 74.793(h) of the Commission's Rules.

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature
License Expires November 30, 2021

Jeremy D. Ruck, PE
March 31, 2020

JEREMY RUCK & ASSOCIATES, INC.
P.O. Box 415
221 S. 1st Avenue
Canton, IL 61520
Tel: 309.647.1200
Fax: 855.332.9537
jeremyruck.com

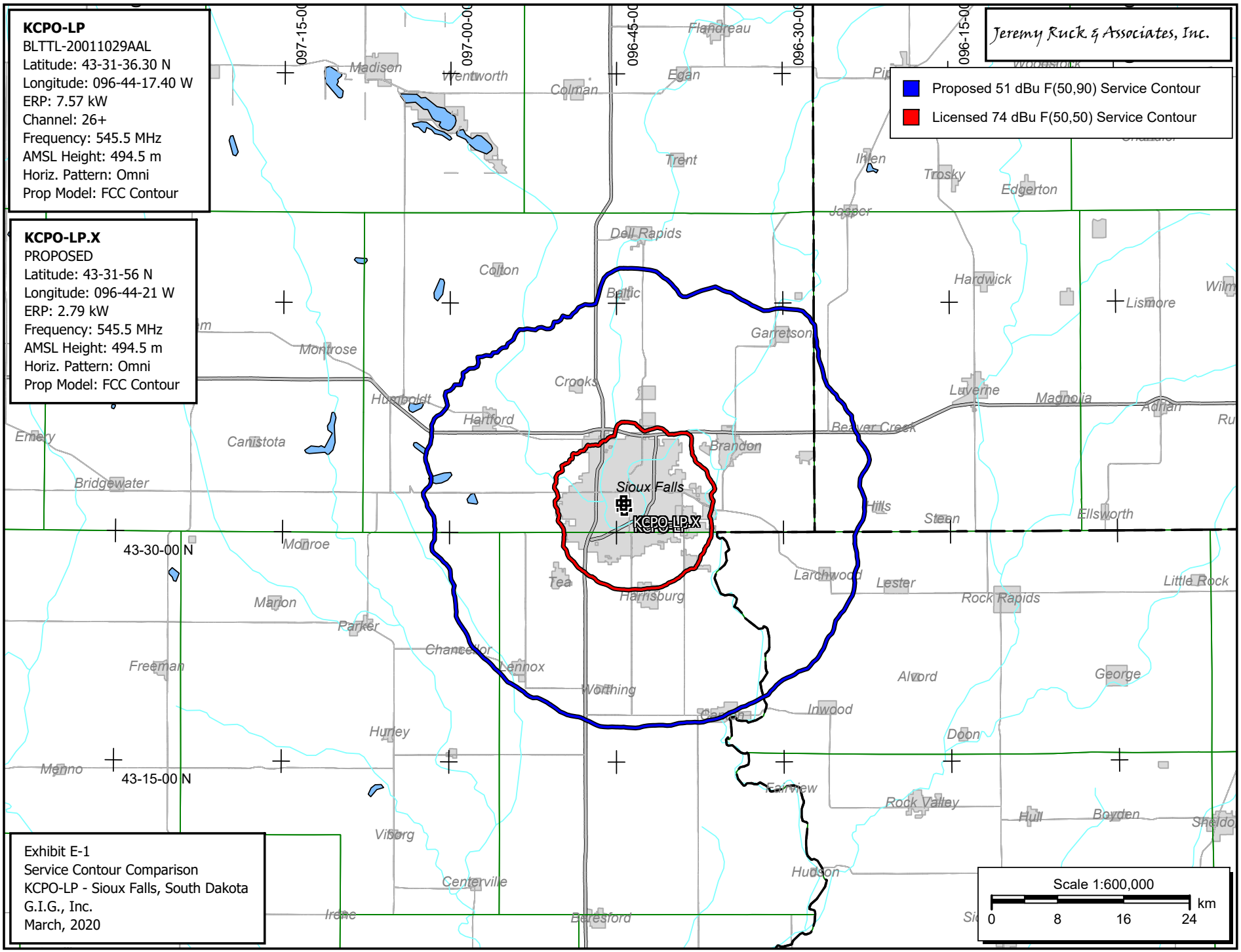

KCPO-LP
BLTTL-20011029AAL
Latitude: 43-31-36.30 N
Longitude: 096-44-17.40 W
ERP: 7.57 kW
Channel: 26+
Frequency: 545.5 MHz
AMSL Height: 494.5 m
Horiz. Pattern: Omni
Prop Model: FCC Contour
KCPO-LP.X
PROPOSED
Latitude: 43-31-56 N
Longitude: 096-44-21 W
ERP: 2.79 kW
Frequency: 545.5 MHz
AMSL Height: 494.5 m
Horiz. Pattern: Omni
Prop Model: FCC Contour
Jeremy Ruck & Associates, Inc.
Proposed 51 dBu F(50,90) Service Contour
Licensed 74 dBu F(50,50) Service Contour
097-15-00
097-00-00
096-45-00
096-30-00
096-15-00
43-30-00 N
43-15-00 N
Sioux Falls
KCPO-LP.X
Madison
Flandreau
Egan
Colman
Trent
Trosky
Edgerton
Jasper
Dell Rapids
Colton
Baltic
Hardwick
Lismore
Garretson
Monrose
Crooks
Luverne
Magnolia
Hartford
Beaver Creek
Brandon
Canistota
Bridgewater
Hills
Steen
Ellsworth
Monroe
Tea
Harrisburg
Larchwood
Lester
Rock Rapids
Little Rock
Marion
Parker
Freeman
Chancellor
Lennox
Worthing
Alvord
George
Inwood
Hurley
Doon
Menno
Fairview
Rock Valley
Hull
Boyden
Viborg
Centerville
Hudson
Irene
Beresford
Exhibit E-1
Service Contour Comparison
KCPO-LP - Sioux Falls, South Dakota
G.I.G., Inc.
March, 2020
Scale 1:600,000
0
8
16
24
km

Exhibit E-2 - TVStudy Interference Study

```
tvstudy v2.2.5 (4uoc83)
Database: 127.0.0.1,  Study: KCPO-LP DFC Ch 26 ASRN 1038384 2.79 kW 494.5 m AMSL 0.5-0.1,  Model: Longley-
Rice
Start: 2020.03.31 12:49:35

Study created: 2020.03.31 12:49:35

Study build station data: LMS TV 2020-03-30

    Proposal: KCPO-LP D26 LD APP SIOUX FALLS, SD
 File number: BLTTL20011029AAL
 Facility ID: 26041
Station data: User record
   Record ID: 140
     Country: U.S.

Build options:
Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:
```

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KTIN	D25	DT	LIC	FORT DODGE, IA	BLEDT20070822ACB	204.7 km
No	K25OU-D	D25	LD	LIC	BROOKINGS, SD	BLANK0000059337	85.5
Yes	KAUN-LP	N25	TX	CP	SIOUX FALLS, SD	BLANK0000054519	0.5
No	KBBA-LD	D26	LD	CP	CEDAR FALLS, IA	BLANK0000052694	380.4
No	KCYM-LD	D26	LD	LIC	FORT DODGE, IA	BLANK0000072384	345.6
No	KCYM-LD	D26	LD	CP	FORT DODGE, IA	BLANK0000073867	345.6
No	KCYM-LD	D26	LD	LIC	FORT DODGE, IA	BLANK0000106670	345.6
Yes	K26JI-D	D26	LD	LIC	SIBLEY, IA	BLDTT20101213AAZ	87.5
No	K26CL-D	D26	LD	LIC	ALEXANDRIA, MN	BLDTL20120313ABG	285.7
No	K26MB-D	D26	LD	CP	BRAINERD, MN	BNPDTL20100609AFM	375.5
No	K26NT-D	D26	LD	LIC	GRANITE FALLS, MN	BLANK0000063066	168.9
No	KXLT-TV	D26	DT	LIC	ROCHESTER, MN	BLANK0000063320	339.3
No	K26PF-D	D26	LD	CP	SAINT CLOUD, MN	BLANK0000071906	289.0
No	K26CS-D	D26	LD	LIC	ST. JAMES, MN	BLDTT20090817ABZ	183.4
No	K26CS-D	D26	LD	CP	ST. JAMES, MN	BLANK0000058899	183.4
No	K26MG-D	D26	LD	CP	WELLS, MN	BNPDTL20100510AJP	241.6
No	K26NU-D	D26	LD	LIC	WILLMAR, MN	BLANK0000060757	226.1
No	KNDB	D26	DT	LIC	BISMARCK, ND	BLCDT20100510AGW	465.6
No	KLNE-TV	D26	DT	CP	LEXINGTON, NE	BLANK0000035902	415.8
No	KLNE-TV	D26	DT	LIC	LEXINGTON, NE	BLEDT20070625ABT	415.8
No	KFDY-LD	D26	LD	LIC	LINCOLN, NE	BLDTL20110908ACA	297.9
No	KPTM	D26	DT	LIC	OMAHA, NE	BLANK0000079038	276.8
Yes	KSXC-LD	D26z	LD	LIC	SOUTH SIOUX CITY, NE	BLANK0000058765	121.6
No	K26MO-D	D26	LD	CP	KADOKA, SD	BNPDTL20100510AHV	362.0
Yes	KDLV-TV	D26	DT	LIC	MITCHELL, SD	BLCDT20081016ADD	136.9
No	W26FD-D	D26	LD	CP	LA CROSSE, WI	BLANK0000071991	428.8
No	K27LD-D	D27	LD	CP	SALIX, IA	BNPDTL20100505AFA	137.5
No	K27NF-D	D27	LD	LIC	JACKSON, MN	BLANK0000064446	140.9
No	KRWF	D27	DT	LIC	REDWOOD FALLS, MN	BLCDT20080502ABG	145.4
No	K27ML-D	D27	LD	CP	RUSHMORE, MN	BNPDTL20100510AHZ	79.5
No	K27LB-D	D27	LD	CP	ARLINGTON, SD	BNPDTL20100505AEF	97.0
Yes	KCWS-LP	N27	TX	CP	SIOUX FALLS, SD	BLANK0000054526	0.5
No	K33GX-D	N33+	TX	LIC	SPRINGFIELD, SD	BLTTL20020515AAF	128.8

```
No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

    Channel: D26
       Mask: Full Service
   Latitude:  43 31 56.00 N (NAD83)
  Longitude:  96 44 21.00 W
Height AMSL: 494.5 m
       HAAT: 55.5 m
   Peak ERP: 2.79 kW
    Antenna: Omnidirectional
```

Elev Pattrn: Generic

50.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	2.79 kW	58.5 m	29.8 km
45.0	2.79	80.3	33.0
90.0	2.79	63.0	30.5
135.0	2.79	64.0	30.6
180.0	2.79	51.9	28.4
225.0	2.79	44.0	26.5
270.0	2.79	38.8	25.1
315.0	2.79	43.1	26.3

Database HAAT does not agree with computed HAAT
Database HAAT: 56 m Computed HAAT: 55 m

Distance to Canadian border: 598.7 km

Distance to Mexican border: 1559.6 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 206.2 degrees Distance: 321.7 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 244.8 degrees Distance: 796.2 km

Study cell size: 0.50 km
Profile point spacing: 0.10 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

Interference to BLANK0000054519 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KAUN-LP	N25	TX	CP	SIOUX FALLS, SD	BLANK0000054519	
Undesireds:	KCPO-LP	N26+	TX	LIC	SIOUX FALLS, SD	BLTTL20011029AAL	1.1 km
	KCPO-LP	D26	LD	APP	SIOUX FALLS, SD	BLTTL20011029AAL	0.5
	KCSD-TV	D24	DT	LIC	SIOUX FALLS, SD	BLEDT20081121AKM	8.3
	KTIN	D25	DT	LIC	FORT DODGE, IA	BLEDT20070822ACB	205.1

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
107.8	115,307	107.5	114,976	92.0	97,776	92.7	98,436	-0.79	-0.68

Undesired	Total IX		Unique IX, before		Unique IX, after	
KCPO-LP N26+ TX LIC	1.0	660	0.7	660		
KCPO-LP D26 LD APP	0.2	0			0.0	0
KCSD-TV D24 DT LIC	14.8	16,540	14.3	16,178	14.3	16,178
KTIN D25 DT LIC	0.5	362	0.0	0	0.0	0

Interference to BLDTT20101213AAZ LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K26JI-D	D26	LD	LIC	SIBLEY, IA	BLDTT20101213AAZ	
Undesireds:	KCPO-LP	N26+	TX	LIC	SIOUX FALLS, SD	BLTTL20011029AAL	87.4 km
	KCPO-LP	D26	LD	APP	SIOUX FALLS, SD	BLTTL20011029AAL	87.5
	KCYM-LD	D26	LD	LIC	FORT DODGE, IA	BLANK0000072384	267.4
	K26CS-D	D26	LD	LIC	ST. JAMES, MN	BLDTT20090817ABZ	116.3
	KSXC-LD	D26z	LD	LIC	SOUTH SIOUX CITY, NE	BLANK0000058765	114.5
	KDLV-TV	D26	DT	LIC	MITCHELL, SD	BLCDT20081016ADD	224.4
	K27ML-D	D27	LD	CP	RUSHMORE, MN	BNPDTL20100510AHZ	26.5

Exhibit E-2 - TVStudy Interference Study

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        Service area       Terrain-limited       IX-free, before       IX-free, after    Percent New IX
  4926.5      50,950    4926.5      50,950    4922.6      50,925    4922.1      50,925     0.01     0.00

Undesired                          Total IX     Unique IX, before      Unique IX, after
KCPO-LP N26+ TX LIC        0.0           0       0.0           0
KCPO-LP D26 LD APP         1.0           5                             0.5           0
KSXC-LD D26z LD LIC        0.2           0       0.2           0       0.2           0
KDLV-TV D26 DT LIC         1.2          22       1.2          22       0.7          17
K27ML-D D27 LD CP          2.4           3       2.4           3       2.4           3

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Interference to BLANK0000058765 LIC scenario 1

             Call      Chan  Svc Status  City, State               File Number             Distance
Desired:     KSXC-LD   D26z  LD  LIC     SOUTH SIOUX CITY, NE      BLANK0000058765

Undesireds:  KCPO-LP   N26+  TX  LIC     SIOUX FALLS, SD           BLTTL20011029AAL        121.0 km
             KCPO-LP   D26   LD  APP     SIOUX FALLS, SD           BLTTL20011029AAL        121.6
             KCYM-LD   D26   LD  LIC     FORT DODGE, IA            BLANK0000072384         265.6
             K26JI-D   D26   LD  LIC     SIBLEY, IA                BLDTT20101213AAZ        114.5
             K26CS-D   D26   LD  LIC     ST. JAMES, MN             BLDTT20090817ABZ        227.2
             KPTM      D26   DT  LIC     OMAHA, NE                 BLANK0000079038         157.3
             KDLV-TV   D26   DT  LIC     MITCHELL, SD              BLCDT20081016ADD        222.0
             K27LD-D   D27   LD  CP      SALIX, IA                 BNPDTL20100505AFA        17.3

        Service area       Terrain-limited       IX-free, before       IX-free, after    Percent New IX
  7576.9     167,787    7441.3     166,012    6964.5     162,677    6964.5     162,677     0.00     0.00

Undesired                          Total IX     Unique IX, before      Unique IX, after
KCPO-LP N26+ TX LIC        0.2           8       0.0           0
KCPO-LP D26 LD APP         3.2           8                             0.0           0
K26JI-D D26 LD LIC        32.8       1,212      12.3         621      12.1         621
KPTM D26 DT LIC          444.9       2,384     410.2       1,991     410.2       1,991
KDLV-TV D26 DT LIC        43.7         463      15.1          23      15.1          23
K27LD-D D27 LD CP          0.5           0       0.2           0       0.2           0

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Interference to BLCDT20081016ADD LIC scenario 1

             Call      Chan  Svc Status  City, State               File Number             Distance
Desired:     KDLV-TV   D26   DT  LIC     MITCHELL, SD              BLCDT20081016ADD

Undesireds:  KCPO-LP   N26+  TX  LIC     SIOUX FALLS, SD           BLTTL20011029AAL        137.1 km
             KCPO-LP   D26   LD  APP     SIOUX FALLS, SD           BLTTL20011029AAL        136.9
             KLNE-TV   D26   DT  CP      LEXINGTON, NE             BLANK0000035902         384.9
             KPTM      D26   DT  LIC     OMAHA, NE                 BLANK0000079038         348.5

        Service area       Terrain-limited       IX-free, before       IX-free, after    Percent New IX
 31715.1      96,850   31289.0      96,572   31183.3      96,283   31094.3      96,010     0.29     0.28

Undesired                          Total IX     Unique IX, before      Unique IX, after
KCPO-LP N26+ TX LIC       19.2          39      14.8          37
KCPO-LP D26 LD APP       116.4         328                           103.9         310
KLNE-TV D26 DT CP          5.6          15       2.0           4       2.0           4
KPTM D26 DT LIC           88.9         248      80.8         235      72.7         219

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Interference to BLCDT20081016ADD LIC scenario 2

             Call      Chan  Svc Status  City, State               File Number             Distance
Desired:     KDLV-TV   D26   DT  LIC     MITCHELL, SD              BLCDT20081016ADD

Undesireds:  KCPO-LP   N26+  TX  LIC     SIOUX FALLS, SD           BLTTL20011029AAL        137.1 km
             KCPO-LP   D26   LD  APP     SIOUX FALLS, SD           BLTTL20011029AAL        136.9
             KLNE-TV   D26   DT  LIC     LEXINGTON, NE             BLEDT20070625ABT        384.9
             KPTM      D26   DT  LIC     OMAHA, NE                 BLANK0000079038         348.5

        Service area       Terrain-limited       IX-free, before       IX-free, after    Percent New IX
 31715.1      96,850   31289.0      96,572   31183.8      96,283   31094.7      96,010     0.29     0.28
```

Exhibit E-2 - TVStudy Interference Study

Undesired		Total IX	Unique IX, before		Unique IX, after	
KCPO-LP N26+ TX LIC	19.2	39	14.8	37		
KCPO-LP D26 LD APP	116.4	328			103.9	310
KLNE-TV D26 DT LIC	5.2	15	1.5	4	1.5	4
KPTM D26 DT LIC	88.9	248	80.8	235	72.7	219

Interference to BLANK0000054526 CP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KCWS-LP	N27	TX	CP	SIOUX FALLS, SD	BLANK0000054526	
Undesireds:	KCPO-LP	N26+	TX	LIC	SIOUX FALLS, SD	BLTTL20011029AAL	1.1 km
	KCPO-LP	D26	LD	APP	SIOUX FALLS, SD	BLTTL20011029AAL	0.5
	K27HJ-D	D27-	LD	LIC	PIERRE, SD	BLANK0000021590	301.6

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
91.7	100,853	91.7	100,853	91.0	100,213	91.7	100,853	-0.80	-0.64

Undesired		Total IX	Unique IX, before		Unique IX, after	
KCPO-LP N26+ TX LIC	0.7	640	0.7	640		
KCPO-LP D26 LD APP	0.0	0			0.0	0

Interference to proposal scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KCPO-LP	D26	LD	APP	SIOUX FALLS, SD	BLTTL20011029AAL	
Undesireds:	K26JI-D	D26	LD	LIC	SIBLEY, IA	BLDTT20101213AAZ	87.5 km
	K26CS-D	D26	LD	LIC	ST. JAMES, MN	BLDTT20090817ABZ	183.4
	KDLV-TV	D26	DT	LIC	MITCHELL, SD	BLCDT20081016ADD	136.9

Service area		Terrain-limited		IX-free		Percent IX	
2494.6	206,371	2493.2	206,351	2347.1	205,390	5.86	0.47

Undesired		Total IX		Unique IX		Prcnt Unique IX	
K26JI-D D26 LD LIC	19.7	55	2.4	0		0.10	0.00
KDLV-TV D26 DT LIC	143.6	961	126.3	906		5.07	0.44