KMTV-TV ENGINEERING STATEMENT

Scripps Broadcasting Holdings, LLC
Omaha, NE

The attached application is prepared on behalf of Scripps Broadcasting Holdings, LLC, licensee of KMTV-TV - Omaha, Nebraska. KMTV-TV is presently licensed to operate on Channel 45 with a nondirectional effective radiated power of 1000 kilowatts at 373.4 meters above average terrain. This application proposes operation on Channel 31 with a top mounted antenna on the present KMTV-TV tower with a nondirectional effective radiated power of 652 kilowatts at 411.1 meters above average terrain to replicate as closely as possible the post-repack facilities authorized for KMTV-TV.

A separate exhibit provides details on this proposed antenna, which was supplied by the antenna manufacturer. The installation of this new top mounted antenna will reduce the overall height of this tower from 410.2 meters AGL to 396.8 meters AGL. Because it doesn't appear that the LMS filing system will permit the overall height of a registered tower to be modified before the registration has been modified, the attached application specifies the presently registered height of this tower. This will be modified once an updated FAA approval has been received and the registration for this tower (1025131) has been modified to reflect the reduced height.

This exhibit includes the results of the FCC's TV Study program for the proposed facilities. As shown by this data, these proposed facilities won't result in a predicted 40.4 dBu noise limited contour which extends more than 1% further than that predicted for KMTV-TV's authorized post-repack facilities in any direction. Furthermore, this data shows that these proposed facilities won't be predicted to cause any new or increased interference exceeding the 0.5% de minimis value permitted by the FCC Rules to any other post-repack facilities requiring protection consideration. It also shows that these

proposed facilities will be predicted to provide noise limited interference free service to 1,335,872 people, or 100.01% of the 1,335,683 people predicted to receive noise limited interference free service from KMTV-TV's post-repack allotment facilities.

The predicted 48 dBu principal community contour for the proposed facilities will totally encompass Omaha, as required by Section 73.625(a) of the FCC Rules.

A separate exhibit attached to this application documents that the proposed KMTV-TV facilities will comply with the FCC's requirements regarding human exposure to nonionizing radiation.

tvstudy v2.2.2
Database: localhost, Study: KMTV-TV 652 KW, Model: Longley-Rice
Start: 2017.06.27 16:25:28

Study created: 2017.06.27 16:24:15

Study build station data: LMS TV 2017-06-26 (8)

    Proposal: KMTV-TV D31 DT APP Omaha, NE
 Facility ID: 35190
Station data: User record
   Record ID: 21
     Country: U.S.
        Zone: II

Non-U.S. records included

Stations potentially affected:

Call	Chan	Svc	Status	City, State	File Number	Distance
KPTH	D30	DT	CP	SIOUX CITY, IA	BLANK0000024773	143.2 km
KPTH	D30	DT	BL	SIOUX CITY, IA	DTVBL77451	143.2
KDCU-DT	D31	DT	LIC	DERBY, KS	BLCDT20090821AAM	410.3
KCWE	D31	DT	LIC	KANSAS CITY, MO	BLCDT20051014ABT	278.4
KMEG	D32	DT	CP	SIOUX CITY, IA	BLANK0000025122	143.2
KMEG	D32	DT	BL	SIOUX CITY, IA	DTVBL39665	143.2

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

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    Channel: D31
   Latitude:  41 18 24.60 N (NAD83)
  Longitude:  96  1 37.70 W
Height AMSL: 753.8 m
       HAAT: 411.1 m
   Peak ERP: 652 kW
    Antenna: Omnidirectional
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40.4 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	652 kW	379.5 m	101.6 km
45.0	652	438.9	106.6
90.0	652	431.5	106.0
135.0	652	413.2	104.4
180.0	652	422.5	105.2
225.0	652	408.4	104.0
270.0	652	395.0	102.9
315.0	652	388.5	102.3

Database HAAT does not agree with computed HAAT
Database HAAT: 411 m Computed HAAT: 410 m

Proposal service area is within baseline plus 1.0%
Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 820.3 km

Distance to Mexican border: 1370.4 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 258.8 degrees Distance: 205.6 km
ERP: 652 kW Field strength: 24.9 dBu, 0.0 mV/m

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 263.6 degrees Distance: 784.9 km

Study cell size: 2.00 km
Profile point spacing: 1.00 km

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

Interference to BLANK0000024773 CP, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KPTH	D30	DT	CP	SIOUX CITY, IA	BLANK0000024773	
Undesireds:	KMTV-TV	D31	DT	BL	OMAHA, NE	DTVBL35190	143.1 km
	KMTV-TV	D31	DT	APP	Omaha, NE		143.2
	KXVO	D29	DT	BL	OMAHA, NE	DTVBL23277	168.5
	KSTC-TV	D30	DT	BL	MINNEAPOLIS, MN	DTVBL35843	369.8

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
39433.6	614,818	39245.2	609,492	38742.1	607,703	38730.0	607,668	0.03	0.01

Undesired	Total IX		Unique IX, before		Unique IX, after	
KMTV-TV D31 DT BL	491.1	1,760	426.7	1,273		
KMTV-TV D31 DT APP	503.2	1,795			438.7	1,308
KXVO D29 DT BL	72.5	509	8.1	22	8.1	22
KSTC-TV D30 DT BL	4.0	7	4.0	7	4.0	7

Interference to DTVBL77451 BL, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KPTH	D30	DT	BL	SIOUX CITY, IA	DTVBL77451	
Undesireds:	KMTV-TV	D31	DT	BL	OMAHA, NE	DTVBL35190	143.1 km
	KMTV-TV	D31	DT	APP	Omaha, NE		143.2
	KXVO	D29	DT	BL	OMAHA, NE	DTVBL23277	168.5
	KSTC-TV	D30	DT	BL	MINNEAPOLIS, MN	DTVBL35843	369.9

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
38846.5	583,937	38646.2	578,343	38118.9	575,958	38106.8	575,917	0.03	0.01

Undesired	Total IX		Unique IX, before		Unique IX, after	
KMTV-TV D31 DT BL	515.3	2,374	454.9	1,900		
KMTV-TV D31 DT APP	527.4	2,415			466.9	1,941
KXVO D29 DT BL	64.5	478	4.0	4	4.0	4
KSTC-TV D30 DT BL	8.0	7	8.0	7	8.0	7

Interference to BLCDT20090821AAM LIC, scenario 1
Proposal causes no interference.

Interference to BLCDT20051014ABT LIC, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KCWE	D31	DT	LIC	KANSAS CITY, MO	BLCDT20051014ABT	
Undesireds:	KMTV-TV	D31	DT	BL	OMAHA, NE	DTVBL35190	278.4 km
	KMTV-TV	D31	DT	APP	Omaha, NE		278.4
	KPXE-TV	D30	DT	LIC	KANSAS CITY, MO	BLANK0000001701	6.8
	KWBM	D31	DT	LIC	HARRISON, AR	BLCDT20091201ASC	293.5
	KWNL-CD	D31	DC	LIC	WINSLOW, AR	BLANK0000004282	327.7
	KDCU-DT	D31	DT	LIC	DERBY, KS	BLCDT20090821AAM	298.2
	KDNL-TV	D31	DT	LIC	ST. LOUIS, MO	BLCDT20021216AAE	366.8
	KSMO-TV	D32	DT	CP	KANSAS CITY, MO	BLANK0000024829	3.9

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
32228.5	2,460,172	31856.0	2,458,913	30907.6	2,441,785	30943.8	2,443,006	-0.12	-0.05

Undesired	Total IX		Unique IX, before		Unique IX, after	
KMTV-TV D31 DT BL	453.2	12,883	381.5	7,796		
KMTV-TV D31 DT APP	409.0	11,599			345.3	6,575
KPXE-TV D30 DT LIC	163.9	2,674	75.9	1,299	75.9	1,299
KWBM D31 DT LIC	19.9	40	0.0	0	0.0	0
KDCU-DT D31 DT LIC	243.6	6,646	168.0	1,569	172.0	1,619
KDNL-TV D31 DT LIC	27.9	46	15.9	30	15.9	30
KSMO-TV D32 DT CP	223.6	1,355	147.5	705	151.5	718

Interference to BLCDT20051014ABT LIC, scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KCWE	D31	DT	LIC	KANSAS CITY, MO	BLCDT20051014ABT	
Undesireds:	KMTV-TV	D31	DT	BL	OMAHA, NE	DTVBL35190	278.4 km
	KMTV-TV	D31	DT	APP	Omaha, NE		278.4
	KPXE-TV	D30	DT	LIC	KANSAS CITY, MO	BLANK0000001701	6.8
	KWBM	D31	DT	LIC	HARRISON, AR	BLCDT20091201ASC	293.5
	KWNL-CD	D31	DC	LIC	WINSLOW, AR	BLANK0000004282	327.7
	KDCU-DT	D31	DT	LIC	DERBY, KS	BLCDT20090821AAM	298.2
	KDNL-TV	D31	DT	LIC	ST. LOUIS, MO	BLCDT20021216AAE	366.8
	KSMO-TV	D32	DT	BL	KANSAS CITY, MO	DTVBL33336	3.9

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
32228.5	2,460,172	31856.0	2,458,913	30907.6	2,441,784	30943.8	2,443,005	-0.12	-0.05

Undesired		Total IX		Unique IX, before		Unique IX, after	
KMTV-TV D31 DT BL	453.2	12,883		381.5	7,796		
KMTV-TV D31 DT APP	409.0	11,599				345.3	6,575
KPXE-TV D30 DT LIC	163.9	2,674		75.9	1,299	75.9	1,299
KWBM D31 DT LIC	19.9	40		0.0	0	0.0	0
KDCU-DT D31 DT LIC	243.6	6,646		168.0	1,569	172.0	1,619
KDNL-TV D31 DT LIC	27.9	46		15.9	30	15.9	30
KSMO-TV D32 DT BL	223.5	1,356		147.4	706	151.5	719

Interference to BLANK0000025122 CP, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KMEG	D32	DT	CP	SIOUX CITY, IA	BLANK0000025122	
Undesireds:	KMTV-TV	D31	DT	BL	OMAHA, NE	DTVBL35190	143.1 km
	KMTV-TV	D31	DT	APP	Omaha, NE		143.2
	WCCO-TV	D32	DT	LIC	MINNEAPOLIS, MN	BMLCDT20120907ABQ	369.8
	KSMO-TV	D32	DT	CP	KANSAS CITY, MO	BLANK0000024829	415.5
	KBIN-TV	D33	DT	LIC	COUNCIL BLUFFS, IA	BLEDT20050711ABX	151.5

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
45983.2	701,226	45710.1	695,951	45017.2	691,940	45017.2	691,938	-0.00	0.00

Undesired		Total IX		Unique IX, before		Unique IX, after	
KMTV-TV D31 DT BL	665.1	3,834	657.0	3,778			
KMTV-TV D31 DT APP	665.1	3,836			657.0	3,780	
WCCO-TV D32 DT LIC	27.8	177	27.8	177	27.8	177	
KSMO-TV D32 DT CP	8.1	56	0.0	0	0.0	0	

Interference to BLANK0000025122 CP, scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KMEG	D32	DT	CP	SIOUX CITY, IA	BLANK0000025122	
Undesireds:	KMTV-TV	D31	DT	BL	OMAHA, NE	DTVBL35190	143.1 km
	KMTV-TV	D31	DT	APP	Omaha, NE		143.2
	WCCO-TV	D32	DT	LIC	MINNEAPOLIS, MN	BMLCDT20120907ABQ	369.8
	KSMO-TV	D32	DT	BL	KANSAS CITY, MO	DTVBL33336	415.5
	KBIN-TV	D33	DT	LIC	COUNCIL BLUFFS, IA	BLEDT20050711ABX	151.5

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
45983.2	701,226	45710.1	695,951	45017.2	691,940	45017.2	691,938	-0.00	0.00

Undesired		Total IX		Unique IX, before		Unique IX, after	
KMTV-TV D31 DT BL	665.1	3,834	657.0	3,778			
KMTV-TV D31 DT APP	665.1	3,836			657.0	3,780	
WCCO-TV D32 DT LIC	27.8	177	27.8	177	27.8	177	
KSMO-TV D32 DT BL	8.1	56	0.0	0	0.0	0	

Interference to DTVBL39665 BL, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KMEG	D32	DT	BL	SIOUX CITY, IA	DTVBL39665	
Undesireds:	KMTV-TV	D31	DT	BL	OMAHA, NE	DTVBL35190	143.2 km
	KMTV-TV	D31	DT	APP	Omaha, NE		143.2
	WCCO-TV	D32	DT	LIC	MINNEAPOLIS, MN	BMLCDT20120907ABQ	369.8
	KSMO-TV	D32	DT	CP	KANSAS CITY, MO	BLANK0000024829	415.5
	KBIN-TV	D33	DT	LIC	COUNCIL BLUFFS, IA	BLEDT20050711ABX	151.5

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
45975.2	701,193	45690.1	695,899	44993.1	691,861	44997.2	691,861	-0.01	0.00

Undesired		Total IX		Unique IX, before		Unique IX, after	
KMTV-TV D31 DT BL	669.1	3,861		661.0	3,805		
KMTV-TV D31 DT APP	665.1	3,861				657.0	3,805
WCCO-TV D32 DT LIC	27.8	177		27.8	177	27.8	177
KSMO-TV D32 DT CP	8.1	56		0.0	0	0.0	0

Interference to DTVBL39665 BL, scenario 2

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KMEG	D32	DT	BL	SIOUX CITY, IA	DTVBL39665	
Undesireds:	KMTV-TV	D31	DT	BL	OMAHA, NE	DTVBL35190	143.2 km
	KMTV-TV	D31	DT	APP	Omaha, NE		143.2
	WCCO-TV	D32	DT	LIC	MINNEAPOLIS, MN	BMLCDT20120907ABQ	369.8
	KSMO-TV	D32	DT	BL	KANSAS CITY, MO	DTVBL33336	415.5
	KBIN-TV	D33	DT	LIC	COUNCIL BLUFFS, IA	BLEDT20050711ABX	151.5

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
45975.2	701,193	45690.1	695,899	44993.1	691,861	44997.2	691,861	-0.01	0.00

Undesired		Total IX		Unique IX, before		Unique IX, after	
KMTV-TV D31 DT BL	669.1	3,861		661.0	3,805		
KMTV-TV D31 DT APP	665.1	3,861				657.0	3,805
WCCO-TV D32 DT LIC	27.8	177		27.8	177	27.8	177
KSMO-TV D32 DT BL	8.1	56		0.0	0	0.0	0

Interference to proposal, scenario 1
0.66% interference

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KMTV-TV	D31	DT	APP	Omaha, NE		
Undesireds:	KPTH	D30	DT	CP	SIOUX CITY, IA	BLANK0000024773	143.2 km
	KCWE	D31	DT	LIC	KANSAS CITY, MO	BLCDT20051014ABT	278.4
	KMEG	D32	DT	CP	SIOUX CITY, IA	BLANK0000025122	143.2

Service area		Terrain-limited		IX-free		Percent IX	
34077.8	1,346,549	33745.3	1,344,796	32929.2	1,335,901	2.42	0.66

Undesired		Total IX		Unique IX		Prcnt Unique IX	
KPTH D30 DT CP	167.9	2,061	0.0	0	0.00	0.00	
KCWE D31 DT LIC	340.0	5,183	340.0	5,183	1.01	0.39	
KMEG D32 DT CP	476.0	3,712	308.1	1,651	0.91	0.12	

Interference to proposal, scenario 2
0.66% interference

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KMTV-TV	D31	DT	APP	Omaha, NE		
Undesireds:	KPTH	D30	DT	BL	SIOUX CITY, IA	DTVBL77451	143.2 km
	KCWE	D31	DT	LIC	KANSAS CITY, MO	BLCDT20051014ABT	278.4
	KMEG	D32	DT	CP	SIOUX CITY, IA	BLANK0000025122	143.2

Service area		Terrain-limited		IX-free		Percent IX	
34077.8	1,346,549	33745.3	1,344,796	32929.2	1,335,901	2.42	0.66

Undesired		Total IX		Unique IX		Prcnt Unique IX	
KPTH D30 DT BL	167.9	2,097	0.0	0		0.00	0.00
KCWE D31 DT LIC	340.0	5,183	340.0	5,183		1.01	0.39
KMEG D32 DT CP	476.0	3,712	308.1	1,615		0.91	0.12

Interference to proposal, scenario 3
0.66% interference

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KMTV-TV	D31	DT	APP	Omaha, NE		
Undesireds:	KPTH	D30	DT	CP	SIOUX CITY, IA	BLANK0000024773	143.2 km
	KCWE	D31	DT	LIC	KANSAS CITY, MO	BLCDT20051014ABT	278.4
	KMEG	D32	DT	BL	SIOUX CITY, IA	DTVBL39665	143.2

Service area		Terrain-limited		IX-free		Percent IX	
34077.8	1,346,549	33745.3	1,344,796	32925.2	1,335,872	2.43	0.66

Undesired		Total IX		Unique IX		Prcnt Unique IX	
KPTH D30 DT CP	167.9	2,061	0.0	0		0.00	0.00
KCWE D31 DT LIC	340.0	5,183	340.0	5,183		1.01	0.39
KMEG D32 DT BL	480.0	3,741	312.1	1,680		0.92	0.12

Interference to proposal, scenario 4
0.66% interference

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KMTV-TV	D31	DT	APP	Omaha, NE		
Undesireds:	KPTH	D30	DT	BL	SIOUX CITY, IA	DTVBL77451	143.2 km
	KCWE	D31	DT	LIC	KANSAS CITY, MO	BLCDT20051014ABT	278.4
	KMEG	D32	DT	BL	SIOUX CITY, IA	DTVBL39665	143.2

Service area		Terrain-limited		IX-free		Percent IX	
34077.8	1,346,549	33745.3	1,344,796	32925.2	1,335,872	2.43	0.66

Undesired		Total IX		Unique IX		Prcnt Unique IX	
KPTH D30 DT BL	167.9	2,097	0.0	0		0.00	0.00
KCWE D31 DT LIC	340.0	5,183	340.0	5,183		1.01	0.39
KMEG D32 DT BL	480.0	3,741	312.1	1,644		0.92	0.12