

LAND MOBILE INTERFERENCE ANALYSIS
LPTV STATION K14PQ-D
SAINT JOSEPH, MISSOURI
CHANNEL 14 0.10 KW (H) (MAX-DA) 345.8 M AMSL

This report was prepared on behalf of LPTV station K14PQ-D, Saint Joseph, MO, in regard to its construction permit facility on Channel 14.* The facility will operate with a maximum directional horizontally-polarized effective radiated power (ERP) of 0.10 kW with an antenna height of 6 m AGL (345.8 m AMSL). A *simple* emission mask is specified. This analysis was based on the construction permit facility.

Channel 14 is immediately adjacent to the 460-470 MHz land mobile (LM) band. This report provides the results of an interference analysis regarding LM receive facilities that are authorized for operation in the adjacent LM band. The analysis is based on the FCC's master frequency database.

The LM interference analysis results are based on the use of a simple emission mask, which, in combination with the distance to LM facilities and low ERP, is sufficient to provide the required protection to LM services in the 460-470 MHz band.

Protection of Land Mobile Facilities

An analysis was conducted of LM facilities in the 460-470 MHz LM band that could be affected by the proposed Channel 14 facility. Specifically, a study of LM facilities within 80 km of the transmitter site, and in the band segment from 465-470 MHz, was conducted. This analysis encompassed 408 LM records.

* See FCC File No. 0000194349. A FCC engineering data summary sheet is attached hereto for the subject K14PQ-D facility for reference.

A sample calculation of the interference analysis with respect to LM facility WPPG876 on 468.7375 MHz is summarized below:

Parameter	Value
Frequency	468.7375 MHz
Ch. 14 Average EIRP (ERP _{dipole} =0.10 kW)	+52.2 dBm
Simple mask emission suppression [†]	47.4 dB
DTV coupling into LM (12.5 kHz assumed LM bandwidth)	16.0 dB
Cross-polarization discrimination [‡]	0.0 dB
Free-space path loss to receive antenna at frequency (1.6 km)	90.0 dB
LM antenna gain	11 dBi
LM line loss	2 dB
Azimuth pattern discrimination factor (dB)	40.0 dB
Received DTV interference power	-132.2 dBm
Equivalent field strength per Section 73.687(e)(4)(ii)	-1.6 dBuV/m
FCC interference criteria per Section 73.687(e)(4)(ii)	17 dBuV/m
Margin to interference per Section 73.687(e)(4)(ii)	+18.6 dB
Analysis result	PASS

The analysis was based on the 17 dBuV/m interference field strength criteria outlined in Section 73.687(e)(4)(ii) of the FCC Rules. As indicated above, the predicted margin to interference to the LM facility is 18.6 dB above the 17 dBuV/m threshold. Therefore, no objectionable interference is predicted from the proposed facility into the LM facility.

[†] See Section 74.794(a)(2)(i) of the FCC Rules.

[‡] Given the use of the transmitting antenna azimuthal pattern discrimination factor, the cross-polarization discrimination factor was not employed for any records studied. This is a conservative analysis approach.

The LM interference analysis results were sorted in order of distance from the K14PQ-D transmitter site, lowest to highest; call sign; and, followed by frequency, from highest to lowest. The results indicate that the K14PQ-D facility is fully compliant with the interference protection limit relating to adjacent LM facilities.



Louis R. du Treil, Jr.

du Treil, Lundin & Rackley, Inc.
5212 Station Way
Sarasota, Florida 34233

July 29, 2022

TV Inquiry LMS

du Treil, Lundin, & Rackley, Inc., Sarasota, Florida



Callsign: K14PQ-D **Service:** LPD **Status:** MOD **App. Status:** GRA **Rec. Type:** C
Channel: 14 **Zone:** **Application File No.:** 0000194349 **Chan Share Host:**
Fac. ID: 188054 **FRN:** 0026455469 **Loc. Record ID:** 25076ff381ac5a260181baed9a0f1a33 **DT Emission Mask:** S
City: SAINT JOSEPH **State:** MO **Country:** US **CP Expiration Date:** 2022-09-06
Party Name: EICB-TV EAST, LLC **Last Change Date:** 2022-07-05

Latitude (NAD 83): 040-04-10.7 **Height AGL (m):** 6 **Polarization:** H
Longitude (NAD 83): 095-11-41.2 **Overall Height AGL (m):** 126.4 **Electrical Tilt (°):** 0
RCAMSL (m): 345.8 **ERP (kW):** 0.1 **Mechanical Tilt (°):**
Site Elevation AMSL (m): 339.8 **Maximum ERP (kW):**
HAAT (m): **Maximum ERP (dBk):** **Degrees True (°):**

Ant Type: DIR **Antenna ID:** 100733 **Rotation (°):** 135

0° 1.000	90° 0.010	180° 0.010	270° 0.010
10° 0.917	100° 0.010	190° 0.010	280° 0.048
20° 0.880	110° 0.010	200° 0.010	290° 0.190
30° 0.710	120° 0.010	210° 0.010	300° 0.280
40° 0.555	130° 0.010	220° 0.010	310° 0.410
50° 0.410	140° 0.010	230° 0.010	320° 0.550
60° 0.280	150° 0.010	240° 0.010	330° 0.710
70° 0.190	160° 0.010	250° 0.010	340° 0.880
80° 0.048	170° 0.010	260° 0.010	350° 0.917

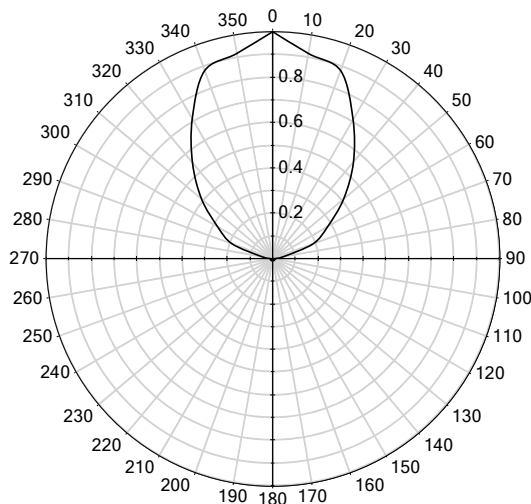
Antenna Make: SBP

Antenna Model: UPSL

Last Change Date: 2022-07-01 14:04:05.6

Ant. Record ID: 25076ff381ac5a260181baed9a0f1a34

Note: Rotation or tilt is not applied to the pattern shown



Type: TOWER	ASRN: 1007070	FAA Study No.: 2005-ACE-1356-OE	Structure Height (m): 122.0
Latitude (NAD 83): 40-04-10.7	Date Received: 08/29/2014	Structure Height (ft): 400.3	
Longitude (NAD 83): 095-11-41.2	Date Entered: 08/29/2014	Ground Elevation (m): 339.8	
	Date Issued: 08/29/2014	Ground Elevation (ft): 1114.8	
	Date Constructed: 09/13/1991	Overall Height AGL (m): 126.4	
	Date Dismantled:	Overall Height AGL (ft): 414.7	
Struct. Address:		Overall Height AMSL (m): 466.2	
.3 MI SSW OF RT 59 I29 INT 4.8 MI SSE		Overall Height AMSL (ft): 1529.5	
MOUND CITY	MO		
Entity Name: American Towers, LLC.			

TABULATION OF LAND MOBILE RECORDS AND INTERFERENCE ANALYSIS
K14PQ-D, SAINT JOSEPH, MISSOURI, CHANNEL 14 (SIMPLE EMISSION MASK)

Callsign	Licensee Name	Status Code	Location City	Location State	Location County	Latitude Degrees	Latitude Minutes	Latitude Seconds	Longitude Degrees	Longitude Minutes	Longitude Seconds	Distance From Center (km)	Azimuth From Center	Assigned Frequency	Distance (mi.)	Simple Emission Mask (dB)	20°Log (Dist km) (dB)	Calc. Loss (no cross pol. disc.) (dB)	Az. Pat. Discrim. (dB)	IX (dBm) (w/o Az. Discrim.)	Total IX (w/ Az. Discrim.) (dBm)	Total IX (in dBu)	Margin (positive passes)
WPPG876	MIDWEST MOBILE RADIO SERVICE, INC	Active	MOUND CITY	MO	HOLT	40	4	51	95	12	21.9	1.6	322.3	468.7375	1.0	47.4	4.1	-40.7	-40.0	-92.2	-132.2	-1.6	18.6
WPPG876	MIDWEST MOBILE RADIO SERVICE, INC	Active	MOUND CITY	MO	HOLT	40	4	51	95	12	21.9	1.6	322.3	467.2375	1.0	50.3	4.1	-40.7	-40.0	-95.1	-135.1	-4.5	21.5
WPPG876	MIDWEST MOBILE RADIO SERVICE, INC	Active	MOUND CITY	MO	HOLT	40	4	51	95	12	21.9	1.6	322.3	467.0625	1.0	50.7	4.1	-40.7	-40.0	-95.5	-135.5	-4.9	21.9
WPUS207	MIDWEST MOBILE RADIO SERVICE, INC	Active	MOUND CITY	MO	HOLT	40	4	51	95	12	21	1.6	322.9	468.7875	1.0	47.3	4.1	-40.7	-40.0	-92.1	-132.1	-1.5	18.5
WPUS207	MIDWEST MOBILE RADIO SERVICE, INC	Active	MOUND CITY	MO	HOLT	40	4	51	95	12	21	1.6	322.9	468.5875	1.0	47.6	4.1	-40.7	-40.0	-92.4	-132.4	-1.8	18.8
WPUS207	MIDWEST MOBILE RADIO SERVICE, INC	Active	MOUND CITY	MO	HOLT	40	4	51	95	12	21	1.6	322.9	468.4375	1.0	47.9	4.1	-40.7	-40.0	-92.7	-132.7	-2.1	19.1
WQQM929	DREWES FARMS INC.	Active	MOUND CITY	MO	HOLT	40	4	51	95	12	21	1.6	322.9	469.125	1.0	46.8	4.1	-40.7	-40.0	-91.6	-131.6	-1.0	18.0
WQSR926	EXIDE TECHNOLOGIES-CANON HOLLO	Active	FOREST CITY	MO	HOLT	40	1	55	95	13	59	5.3	217.9	469.3375	3.3	46.6	14.5	-40.7	-27.9	-101.8	-129.6	1.0	16.0
WQSR926	EXIDE TECHNOLOGIES-CANON HOLLO	Active	FOREST CITY	MO	HOLT	40	1	55	95	13	59	5.3	217.9	468.8125	3.3	47.3	14.5	-40.7	-27.9	-102.5	-130.4	0.2	16.8
WRAD812	MOYERS, CODY	Active	MOUND CITY	MO	HOLT	40	8	31	95	11	1.6	8.1	6.6	469.1625	5.0	46.8	18.2	-40.7	-40.0	-105.7	-145.7	-15.1	32.1
WQPN549	Haug Communications Inc	Active	MOUND CITY	MO	HOLT	40	8	56.2	95	13	49.7	9.3	341	467.05	5.8	50.7	19.4	-40.7	-40.0	-110.8	-150.8	-20.2	37.2
WPTM592	GOLDEN TRIANGLE ENERGY LLC	Active	CRAIG	MO	HOLT	40	11	21	95	22	10.9	20.0	311.8	466.7375	12.4	51.5	26.0	-40.7	-40.0	-118.2	-158.2	-27.6	44.6
WNPQ425	DAVIS FERTILIZER	Active	GRAHAM	MO	NODAWAY	40	12	13	95	1	10.9	21.1	44.9	469.6250	13.1	46.2	26.5	-40.7	-40.0	-113.5	-153.5	-22.9	39.9
WQJ980	WRIGHT, JOHN	Active	WHITE CLOUD	KS	DONIPHAN	39	58	9.1	95	24	22.1	21.2	238.2	469.9375	13.2	46.0	26.5	-40.7	-40.0	-113.3	-153.3	-22.7	39.7
WQQA374	IDOL, HARRISON	Active	WHITE CLOUD	KS	BROWN	39	57	45.9	95	26	5.6	23.7	239.9	468.575	14.7	47.7	27.5	-40.7	-40.0	-115.9	-155.9	-25.3	42.3
WRTT800	WHITE CLOUD WIND PROJECT LLC	Active	MARYVILLE	MO	NODAWAY	40	15	6.2	94	57	27.3	28.6	44.8	469.275	17.8	46.6	29.1	-40.7	-40.0	-116.5	-156.5	-25.9	42.9
WPSY957	FEDEX GROUND	Active	Shawnee	KS	JOHNSON	39	58	38.9	94	51	38.3	30.3	109.7	466.875	18.8	51.2	29.6	-40.7	-2.2	-121.5	-123.7	6.9	10.1
WNJW943	CITY OF SAVANNAH - WATER DEPARTM	Active	SAVANNAH	MO	ANDREW	39	56	52	94	51	46.9	31.4	115.5	468.4750	19.5	47.8	29.9	-40.7	-1.1	-118.5	-119.6	11.0	6.0
WNJW943	CITY OF SAVANNAH - WATER DEPARTM	Active	AMAZONIA	MO	ANDREW	39	54	51.5	94	52	43	32.0	122.6	468.4750	19.9	47.8	30.1	-40.7	-0.9	-118.7	-119.5	11.1	5.9
WNJW943	CITY OF SAVANNAH - WATER DEPARTM	Active	Amazonia	MO	ANDREW	39	53	1.8	94	53	51.2	32.7	129.1	468.4750	20.3	47.8	30.3	-40.7	-0.4	-118.8	-119.3	11.3	5.7
WNJW943	CITY OF SAVANNAH - WATER DEPARTM	Active	AMIZONIA	MO	ANDREW	39	53	4	94	53	44.9	32.8	128.9	468.4750	20.4	47.8	30.3	-40.7	-0.5	-118.9	-119.4	11.2	5.8
KNHF879	Haug Communications Inc.	Active	Shubert	NE	RICHARDSON	40	1	42	95	35	39.9	34.4	262.4	469.4125	21.4	46.5	30.7	-40.7	-40.0	-117.9	-157.9	-27.3	44.3
KNHF879	Haug Communications Inc.	Active	Shubert	NE	RICHARDSON	40	1	42	95	35	39.9	34.4	262.4	468.2375	21.4	48.3	30.7	-40.7	-40.0	-119.7	-159.7	-29.1	46.1
KNHF879	Haug Communications Inc.	Active	Shubert	NE	RICHARDSON	40	1	42	95	35	39.9	34.4	262.4	466.1375	21.4	53.0	30.7	-40.7	-40.0	-124.4	-164.4	-33.8	50.8
WRNX651	Consolidated Grain and Barge	Active	Falls City	NE	RICHARDSON	40	2	49.3	95	36	4.5	34.8	266.0	467.8500	21.6	49.0	30.8	-40.7	-40.0	-120.5	-160.5	-29.9	46.9
WPKF612	City of Falls City	Active	FALLS CITY	NE	RICHARDSON	40	3	46.4	95	36	21.1	35.1	268.9	465.4250	21.8	54.9	30.9	-40.7	-40.0	-126.5	-166.5	-35.9	52.9
WNJW943	CITY OF SAVANNAH - WATER DEPARTM	Active	SAVANNAH	MO	ANDREW	39	56	49.4	94	48	12.4	36.1	112.1	468.4750	22.4	47.8	31.2	-40.7	-1.6	-119.7	-121.3	9.3	7.7
WRMW784	ANDREW COUNTY PWSO #4	Active	REA	MO	ANDREW	40	3	36.4	94	45	56.3	36.6	91.5	467.4625	22.7	49.8	31.3	-40.7	-6.1	-121.8	-127.9	2.7	14.3
WQNW227	PONY EXPRESS COUNCIL, BOY SCOUTS	Active	ST. JOSEPH	MO	ANDREW	39	50	20.9	94	52	30.1	37.4	133.1	468.6000	23.2	47.6	31.5	-40.7	-0.1	-119.8	-119.9	10.7	6.3
WQNW227	PONY EXPRESS COUNCIL, BOY SCOUTS	Active	ST. JOSEPH	MO	ANDREW	39	50	20.9	94	52	30.1	37.4	133.1	467.3500	23.2	50.1	31.5	-40.7	-0.1	-122.2	-122.4	8.2	8.8
WPWF430	LARMAR INC.	Active	ROBINSON	KS	BROWN	39	47	59	95	27	57	37.9	217.7	467.0250	23.6	50.8	31.6	-40.7	-27.9	-123.1	-150.9	-20.3	37.3
WQOG998	FAIRVIEW MILLS LLC	Active	HIAWATHA	KS	BROWN	39	51	9	95	32	54.8	38.7	231.4	466.5625	24.0	51.9	31.8	-40.7	-40.0	-124.4	-164.4	-33.8	50.8
WNZ5923	HAUG COMMUNICATIONS INC	Active	SAINT JOSEPH	MO	ANDREW	39	51	32	94	49	46.9	39	126.9	469.25	24.2	46.7	31.8	-40.7	-0.7	-119.2	-119.9	10.7	6.3
WPHM769	HAUG COMMUNICATIONS INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	51	32	94	49	46.9	39	126.9	468.275	24.2	48.2	31.8	-40.7	-0.7	-120.7	-121.4	9.2	7.8
WPKV204	HAUG COMMUNICATIONS INC	Active	SAINT JOSEPH	MO	ANDREW	39	51	32	94	49	46.9	39	126.9	466.925	24.2	51.0	31.8	-40.7	-0.7	-123.5	-124.2	6.4	10.6
WPVK266	MIDWEST MOBILE RADIO SERVICE, INC	Active	HIAWATHA	KS	BROWN	39	51	18.2	95	33	23	39.0	232.4	469.7875	24.2	46.1	31.8	-40.7	-40.0	-118.7	-158.7	-28.1	45.1
WPVK266	MIDWEST MOBILE RADIO SERVICE, INC	Active	HIAWATHA	KS	BROWN	39	51	18.2	95	33	23	39.0	232.4	469.6125	24.2	46.3	31.8	-40.7	-40.0	-118.8	-158.8	-28.2	45.2
WPVK266	MIDWEST MOBILE RADIO SERVICE, INC	Active	HIAWATHA	KS	BROWN	39	51	18.2	95	33	23	39.0	232.4	468.2875	24.2	48.2	31.8	-40.7	-40.0	-120.7	-160.7	-30.1	47.1
WPWF225	KOCH & COMPANY	Active	HIAWATHA	KS	BROWN	39	50	56.1	95	33	3.7	39.1	231.2	468.2500	24.3	48.2	31.8	-40.7	-40.0	-120.8	-160.8	-30.2	47.2
WRAD980	ADM ALLIANCE NUTRITION, INC.	Active	Hiawatha	KS	BROWN	39	50	40.7	95	32	50.1	39.1	230.3	469.9250	24.3	46.0	31.8	-40.7	-40.0	-118.6	-158.6	-28.0	45.0
KTV854	HEARTLAND REGIONAL MEDICAL CENT	Active		MO	NODAWAY	40	19	36	94	52	37.9	39.3	43.2	468.1750	24.4	48.4	31.9	-40.7	-40.0	-121.0	-161.0	-30.4	47.4
KTV854	HEARTLAND REGIONAL MEDICAL CENT	Active		MO	NODAWAY	40	19	36	94	52	37.9	39.3	43.2	468.1500	24.4	48.4	31.9	-40.7	-40.0	-121.0	-161.0	-30.4	47.4
KTV854	HEARTLAND REGIONAL MEDICAL CENT	Active		MO	NODAWAY	40	19	36	94	52	37.9	39.3	43.2	468.1250	24.4	48.5	31.9	-40.7	-40.0	-121.1	-161.1	-30.5	47.5
KTV854	HEARTLAND REGIONAL MEDICAL CENT	Active		MO	NODAWAY	40	19	36	94	52	37.9	39.3	43.2	468.1000	24.4	48.5	31.9	-40.7	-40.0	-121.1	-161.1	-30.5	47.5
KTV854	HEARTLAND REGIONAL MEDICAL CENT	Active		MO	NODAWAY	40	19	36	94	52	37.9	39.3	43.2	468.0750	24.4	48.6	31.9	-40.7	-40.0	-121.2	-161.2	-30.6	47.6
KTV854	HEARTLAND REGIONAL MEDICAL CENT	Active		MO	NODAWAY	40	19	36	94	52	37.9	39.3	43.2	468.05	24.4	48.6	31.9	-40.7	-40.0	-121.2	-161.2	-30.6	47.6
KTV854	HEARTLAND REGIONAL MEDICAL CENT	Active		MO	NODAWAY	40	19	36	94	52	37.9	39.3	43.2	468.025	24.4	48.7	31.9	-40.7	-40.0	-121.3	-161.3	-30.7	47.7
KTV854	HEARTLAND REGIONAL MEDICAL CENT	Active		MO	NODAWAY	40	19	36	94	52	37.9	39.3	43.2	468.0000	24.4	48.7	31.9	-40.7	-40.0	-121.3	-161.3	-30.7	47.7

TABULATION OF LAND MOBILE RECORDS AND INTERFERENCE ANALYSIS
K14PQ-D, SAINT JOSEPH, MISSOURI, CHANNEL 14 (SIMPLE EMISSION MASK)

Callsign	Licensee Name	Status Code	Location City	Location State	Location County	Latitude Degrees	Latitude Minutes	Latitude Seconds	Longitude Degrees	Longitude Minutes	Longitude Seconds	Distance From Center (km)	Azimuth From Center	Assigned Frequency	Distance (mi.)	Simple Emission Mask (dB)	20*Log (Dist km) (dB)	Calc. Loss (no cross pol. disc.) (dB)	Az. Pat. Discrim. (dB)	IX (dBm) (w/o Az. Discrim.)	Total IX (w/ Az. Discrim.) (dBm)	Total IX (in dBu)	Margin (positive passes)
WPAW492	HAUG COMMUNICATIONS INC.	Active	AVENUE CITY	MO	ANDREW	39	51	31.2	94	48	59.2	39.9	125.9	469.2500	24.8	46.7	32.0	-40.7	-0.8	-119.4	-120.2	10.4	6.6
WPAW492	HAUG COMMUNICATIONS INC.	Active	AVENUE CITY	MO	ANDREW	39	51	31.2	94	48	59.2	39.9	125.9	468.6250	24.8	47.6	32.0	-40.7	-0.8	-120.3	-121.1	9.5	7.5
WPAW492	HAUG COMMUNICATIONS INC.	Active	AVENUE CITY	MO	ANDREW	39	51	31.2	94	48	59.2	39.9	125.9	468.2750	24.8	48.2	32.0	-40.7	-0.8	-120.9	-121.7	8.9	8.1
WPAW492	HAUG COMMUNICATIONS INC.	Active	AVENUE CITY	MO	ANDREW	39	51	31.2	94	48	59.2	39.9	125.9	466.9750	24.8	50.9	32.0	-40.7	-0.8	-123.6	-124.4	6.2	10.8
WPAW492	HAUG COMMUNICATIONS INC.	Active	AVENUE CITY	MO	ANDREW	39	51	31.2	94	48	59.2	39.9	125.9	466.4000	24.8	52.3	32.0	-40.7	-0.8	-125.0	-125.8	4.8	12.2
WPPY351	COMMUNICATIONS EQUIPMENT HOLD	Active	ST JOSEPH	MO	ANDREW	39	51	34	94	49	0	39.9	125.8	468.9375	24.8	47.1	32.0	-40.7	-0.8	-119.8	-120.6	10.0	7.0
WPPY351	COMMUNICATIONS EQUIPMENT HOLD	Active	ST JOSEPH	MO	ANDREW	39	51	34	94	49	0	39.9	125.8	468.5625	24.8	47.7	32.0	-40.7	-0.8	-120.4	-121.2	9.4	7.6
WPPY351	COMMUNICATIONS EQUIPMENT HOLD	Active	ST JOSEPH	MO	ANDREW	39	51	34	94	49	0	39.9	125.8	468.5125	24.8	47.8	32.0	-40.7	-0.8	-120.5	-121.3	9.3	7.7
WPPY351	COMMUNICATIONS EQUIPMENT HOLD	Active	ST JOSEPH	MO	ANDREW	39	51	34	94	49	0	39.9	125.8	468.4125	24.8	47.9	32.0	-40.7	-0.8	-120.7	-121.4	9.2	7.8
WPPY351	COMMUNICATIONS EQUIPMENT HOLD	Active	ST JOSEPH	MO	ANDREW	39	51	34	94	49	0	39.9	125.8	466.9875	24.8	50.9	32.0	-40.7	-0.8	-123.6	-124.4	6.2	10.8
WQOV502	DELUXE CORP	Active	MARYVILLE	MO	NODAWAY	40	20	6	94	52	14.9	40.4	42.9	467.8125	25.1	49.1	32.1	-40.7	-40.0	-121.9	-161.9	-31.3	48.3
WQOV502	DELUXE CORP	Active	MARYVILLE	MO	NODAWAY	40	20	6	94	52	14.9	40.4	42.9	467.7625	25.1	49.2	32.1	-40.7	-40.0	-122.0	-162.0	-31.4	48.4
WQWF645	Haug Communications, Inc.	Active	Hiawatha	KS	BROWN	39	50	26.8	95	33	56.4	40.6	231.3	469.8625	25.2	46.1	32.2	-40.7	-40.0	-119.0	-159.0	-28.4	45.4
WQWF645	Haug Communications, Inc.	Active	Hiawatha	KS	BROWN	39	50	26.8	95	33	56.4	40.6	231.3	467.3000	25.2	50.2	32.2	-40.7	-40.0	-123.0	-163.0	-32.4	49.4
WNFQ548	NORTHWEST MISSOURI STATE UNIVER	Active	MARYVILLE	MO	NODAWAY	40	21	14.6	94	53	15.2	41	39.4	468.8875	25.5	47.2	32.3	-40.7	-40.0	-120.1	-160.1	-29.5	46.5
WNFQ548	NORTHWEST MISSOURI STATE UNIVER	Active	MARYVILLE	MO	NODAWAY	40	21	14.6	94	53	15.2	41.0	39.4	468.4625	25.5	47.9	32.3	-40.7	-40.0	-120.8	-160.8	-30.2	47.2
WNFQ548	NORTHWEST MISSOURI STATE UNIVER	Active	MARYVILLE	MO	NODAWAY	40	21	14.6	94	53	15.2	41.0	39.4	466.7125	25.5	51.5	32.3	-40.7	-40.0	-124.5	-164.5	-33.9	50.9
WNFQ548	NORTHWEST MISSOURI STATE UNIVER	Active	MARYVILLE	MO	NODAWAY	40	21	14.6	94	53	15.2	41.0	39.4	466.1250	25.5	53.0	32.3	-40.7	-40.0	-126.0	-166.0	-35.4	52.4
WPSM802	AFFINITY GAMING LLC DBA ST JO FROH	Active	ST. JOSEPH	MO	BUCHANAN	39	47	0	94	52	37.9	41.8	139.5	468.9000	26.0	47.1	32.4	-40.7	-0.3	-120.3	-120.6	10.0	7.0
WPSM802	AFFINITY GAMING LLC DBA ST JO FROH	Active	ST. JOSEPH	MO	BUCHANAN	39	47	0	94	52	37.9	41.8	139.5	466.8000	26.0	51.3	32.4	-40.7	-0.3	-124.4	-124.7	5.9	11.1
WQEV741	SNORKEL INTERNATIONAL	Active	ELWOOD	KS	DONIPHAN	39	45	21	94	53	49.9	43.1	143.9	466.1750	26.8	52.9	32.7	-40.7	-0.6	-126.3	-126.9	3.7	13.3
WPWF712	STARRBURN ENTERPRISES,INC. DBA/ST	Active	SAINT JOSEPH	MO	BUCHANAN	39	47	12	94	50	46	43.3	136.5	469.1625	26.9	46.8	32.7	-40.7	-0.1	-120.2	-120.3	10.3	6.7
WNWL454	H P I PRODUCTS, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	45	51	94	52	23.9	43.7	141.0	469.4250	27.2	46.5	32.8	-40.7	-0.4	-120.0	-120.4	10.2	6.8
WQWR389	VESTA -AMERICAN WIND TECHNOLOG	Active	TARKIO	MO	ATCHISON	40	26	26	95	22	37.3	44	339.5	469.675	27.3	46.2	32.9	-40.7	-40.0	-119.8	-159.8	-29.2	46.2
KAH380	SAINT JOSEPH, CITY OF	Active	SAINT JOSEPH	MO	BUCHANAN	39	46	12	94	51	16.9	44.2	138.9	465.6	27.5	54.4	32.9	-40.7	-0.2	-128.0	-128.2	2.4	14.6
WQPQ709	COMPLETE LAWN CARE	Active				39	49	29	94	47	15	44.2	128.0	467.0750	27.5	50.7	32.9	-40.7	-0.5	-124.3	-124.8	5.8	11.2
WQPQ709	COMPLETE LAWN CARE	Active				39	49	29	94	47	15	44.2	128.0	466.3750	27.5	52.4	32.9	-40.7	-0.5	-126.0	-126.5	4.1	12.9
WQPQ709	COMPLETE LAWN CARE	Active				39	49	29	94	47	15	44.2	128.0	466.0250	27.5	53.3	32.9	-40.7	-0.5	-126.9	-127.4	3.2	13.8
WPOK594	MISSOURI, STATE OF	Active	ST JOSEPH	MO	BUCHANAN	39	46	8	94	51	16.9	44.3	139	465.3	27.5	55.3	32.9	-40.7	-0.3	-128.9	-129.2	1.4	15.6
WPJS831	MISSOURI, STATE OF DEPARTMENT OF	Active	MARYVILLE	MO	NODAWAY	40	20	42	94	48	59.9	44.4	46.2	465.625	27.6	54.4	32.9	-40.7	-37.2	-128.0	-165.2	-34.6	51.6
WPJS831	MISSOURI, STATE OF DEPARTMENT OF	Active	MARYVILLE	MO	NODAWAY	40	20	42	94	48	59.9	44.4	46.2	465.375	27.6	55.1	32.9	-40.7	-37.2	-128.7	-165.9	-35.3	52.3
WPJS831	MISSOURI, STATE OF DEPARTMENT OF	Active	MARYVILLE	MO	NODAWAY	40	20	42	94	48	59.9	44.4	46.2	465.025	27.6	56.1	32.9	-40.6	-37.2	-129.7	-166.9	-36.3	53.3
WPPB392	SAINT JOSEPH, CITY OF	Active		MO	BUCHANAN	39	46	0	94	51	21.9	44.4	139.3	465.275	27.6	55.4	32.9	-40.7	-0.3	-129.0	-129.3	1.3	15.7
WPIN822	MIDWEST MOBILE RADIO SERVICE, INC	Active	MARYVILLE	MO	NODAWAY	40	22	32	94	51	24	44.5	40.1	466.575	27.7	51.9	33.0	-40.7	-40.0	-125.5	-165.5	-34.9	51.9
WPPG876	MIDWEST MOBILE RADIO SERVICE, INC	Active	MARYVILLE	MO	NODAWAY	40	22	32	94	51	24	44.5	40.1	468.8625	27.7	47.2	33.0	-40.7	-40.0	-120.9	-160.9	-30.3	47.3
WPUS207	MIDWEST MOBILE RADIO SERVICE, INC	Active	Maryville	MO	NODAWAY	40	22	32	94	51	24	44.5	40.1	468.2125	27.7	48.3	33.0	-40.7	-40.0	-122.0	-162.0	-31.4	48.4
WPUS207	MIDWEST MOBILE RADIO SERVICE, INC	Active	Maryville	MO	NODAWAY	40	22	32	94	51	24	44.5	40.1	467.1125	27.7	50.6	33.0	-40.7	-40.0	-124.3	-164.3	-33.7	50.7
WPUS207	MIDWEST MOBILE RADIO SERVICE, INC	Active	Maryville	MO	NODAWAY	40	22	32	94	51	24	44.5	40.1	466.9375	27.7	51.0	33.0	-40.7	-40.0	-124.7	-164.7	-34.1	51.1
WQDK999	I & M MACHINE AND FABRICATION CO	Active	Saint Joseph	MO	BUCHANAN	39	45	47.8	94	51	21.6	44.7	139.6	466.4875	27.8	52.1	33.0	-40.7	-0.3	-125.8	-126.1	4.5	12.5
KD28649	BRINK'S INCORPORATED	Active		MO	BUCHANAN	39	45	57	94	51	2.9	44.8	138.9	467.8125	27.8	49.1	33.0	-40.7	-0.2	-122.8	-123.0	7.6	9.4
WPKP638	Bunge Milling, Inc.	Active		KS	ATCHISON	39	45	55	94	51	1.9	44.8	138.9	466.2125	27.8	52.8	33.0	-40.7	-0.2	-126.5	-126.7	3.9	13.1
WQPV735	HAUG COMMUNICATIONS INC	Active	PURCELL	KS	BROWN	39	41	1	95	20	43	44.8	196.7	466.2500	27.8	52.7	33.0	-40.7	-11.3	-126.4	-137.7	-7.1	24.1
WPGQ234	AMERI PAC INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	45	37	94	51	17	45	139.8	467.875	28.0	49.0	33.1	-40.7	-0.3	-122.7	-123.0	7.6	9.4
WPOC271	BROADMOOR APARTMENTS	Active		MO	BUCHANAN	39	47	34	94	48	15.9	45.4	132.6	467.925	28.2	48.9	33.1	-40.7	-0.2	-122.7	-122.9	7.7	9.3
WQHD886	HOME DEPOT U.S.A., INC.	Active	St. Joseph	MO	BUCHANAN	39	47	18	94	48	21	45.6	133.2	467.9	28.3	48.9	33.2	-40.7	-0.1	-122.8	-122.9	7.7	9.3
WQHD886	HOME DEPOT U.S.A., INC.	Active	St. Joseph	MO	BUCHANAN	39	47	18	94	48	21	45.6	133.2	467.875	28.3	49.0	33.2	-40.7	-0.1	-122.8	-123.0	7.6	9.4
WQHD886	HOME DEPOT U.S.A., INC.	Active	St. Joseph	MO	BUCHANAN	39	47	18	94	48	21	45.6	133.2	467.8500	28.3	49.0	33.2	-40.7	-0.1	-122.9	-123.0	7.6	9.4
WQHD886	HOME DEPOT U.S.A., INC.	Active	St. Joseph	MO	BUCHANAN	39	47	18	94	48	21	45.6	133.2	467.8375	28.3	49.0	33.2	-40.7	-0.1	-122.9	-123.1	7.5	9.5

TABULATION OF LAND MOBILE RECORDS AND INTERFERENCE ANALYSIS
K14PQ-D, SAINT JOSEPH, MISSOURI, CHANNEL 14 (SIMPLE EMISSION MASK)

Callsign	Licensee Name	Status Code	Location City	Location State	Location County	Latitude Degrees	Latitude Minutes	Latitude Seconds	Longitude Degrees	Longitude Minutes	Longitude Seconds	Distance From Center (km)	Azimuth From Center	Assigned Frequency	Distance (mi.)	Simple Emission Mask (dB)	20*Log (Dist km) (dB)	Calc. Loss (no cross pol. disc.) (dB)	Az. Pat. Discrim. (dB)	IX (dBm) (w/o Az. Discrim.)	Total IX (w/ Az. Discrim.) (dBm)	Total IX (in dBu)	Margin (positive passes)
WQHD886	HOME DEPOT U.S.A., INC.	Active	St. Joseph	MO	BUCHANAN	39	47	18	94	48	21	45.6	133.2	467.7625	28.3	49.2	33.2	-40.7	-0.1	-123.1	-123.2	7.4	9.6
KNEM508	GFG Agriproducts, LLC	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	49.7	94	51	6.1	46.3	140.7	469.6875	28.8	46.2	33.3	-40.7	-0.4	-120.2	-120.6	10.0	7.0
WRCJ320	Grimm, Kent	Active	Morrill	KS	BROWN	39	54	53.1	95	41	58.1	46.4	248.3	469.4500	28.8	46.4	33.3	-40.7	-40.0	-120.5	-160.5	-29.9	46.9
WRCJ320	Grimm, Kent	Active	Morrill	KS	BROWN	39	54	53.1	95	41	58.1	46.4	248.3	467.2500	28.8	50.3	33.3	-40.7	-40.0	-124.3	-164.3	-33.7	50.7
WRCJ320	Grimm, Kent	Active	Morrill	KS	BROWN	39	54	53.1	95	41	58.1	46.4	248.3	466.4500	28.8	52.2	33.3	-40.7	-40.0	-126.2	-166.2	-35.6	52.6
WQJ5734	MISSOURI, STATE OF DEPARTMENT OF	Active	ST JOSEPH	MO	BUCHANAN	39	46	22.4	94	48	40.3	46.5	135.1	465.525	28.9	54.7	33.3	-40.7	0.0	-128.7	-128.7	1.9	15.1
WQJ5734	MISSOURI, STATE OF DEPARTMENT OF	Active	ST JOSEPH	MO	BUCHANAN	39	46	22.4	94	48	40.3	46.5	135.1	465.4625	28.9	54.8	33.3	-40.7	0.0	-128.8	-128.8	1.8	15.2
WQJ5734	MISSOURI, STATE OF DEPARTMENT OF	Active	ST JOSEPH	MO	BUCHANAN	39	46	22.4	94	48	40.3	46.5	135.1	465.3875	28.9	55.0	33.3	-40.7	0.0	-129.0	-129.0	1.6	15.4
WQJ5734	MISSOURI, STATE OF DEPARTMENT OF	Active	ST JOSEPH	MO	BUCHANAN	39	46	22.4	94	48	40.3	46.5	135.1	465.1125	28.9	55.8	33.3	-40.7	0.0	-129.8	-129.8	0.8	16.2
WQZD471	SEALED AIR, INC.	Active	ST. JOSEPH	MO	BUCHANAN	39	43	13	94	53	43	46.5	146.6	467.1875	28.9	50.4	33.3	-40.7	-0.8	-124.5	-125.3	5.3	11.7
WPRB356	Clarios, LLC	Active	ST. JOSEPH	MO	BUCHANAN	39	43	4.7	94	53	50	46.6	146.9	469.175	29.0	46.8	33.4	-40.7	-0.8	-120.9	-121.6	9.0	8.0
WPBQ844	National Beef Leathers, LLC	Active	ST. JOSEPH	MO	BUCHANAN	39	44	15.8	94	51	36.7	46.7	142.2	469.1125	29.0	46.8	33.4	-40.7	-0.5	-121.0	-121.5	9.1	7.9
WPEZ421	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	45	0	94	50	25.9	46.7	139.5	468.9625	29.0	47.1	33.4	-40.7	-0.3	-121.2	-121.5	9.1	7.9
WPEZ421	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	45	0	94	50	25.9	46.7	139.5	468.3000	29.0	48.1	33.4	-40.7	-0.3	-122.2	-122.5	8.1	8.9
WPEZ421	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	45	0	94	50	25.9	46.7	139.5	468.2250	29.0	48.3	33.4	-40.7	-0.3	-122.4	-122.7	7.9	9.1
WPEZ421	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	45	0	94	50	25.9	46.7	139.5	466.9750	29.0	50.9	33.4	-40.7	-0.3	-125.0	-125.3	5.3	11.7
WPEZ421	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	45	0	94	50	25.9	46.7	139.5	466.8875	29.0	51.1	33.4	-40.7	-0.3	-125.2	-125.5	5.1	11.9
WPPV266	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	45	0	94	50	25.9	46.7	139.5	468.8000	29.0	47.3	33.4	-40.7	-0.3	-121.4	-121.7	8.9	8.1
WPPV935	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	45	0	94	50	25.9	46.7	139.5	469.7625	29.0	46.1	33.4	-40.7	-0.3	-120.3	-120.5	10.1	6.9
WPPV935	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	45	0	94	50	25.9	46.7	139.5	469.5875	29.0	46.3	33.4	-40.7	-0.3	-120.4	-120.7	9.9	7.1
WPPV935	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	45	0	94	50	25.9	46.7	139.5	468.9875	29.0	47.0	33.4	-40.7	-0.3	-121.1	-121.4	9.2	7.8
WPPV935	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	45	0	94	50	25.9	46.7	139.5	466.9125	29.0	51.1	33.4	-40.7	-0.3	-125.1	-125.4	5.2	11.8
WQFF593	JCPenney Shared Services Center	Active	ST. JOSEPH	MO	BUCHANAN	39	46	37	94	48	10	46.7	134.1	466.9625	29.0	51.0	33.4	-40.7	-0.1	-125.0	-125.1	5.5	11.5
KNHF879	Haug Communications Inc.	Active	Shubert	NE	RICHARDSON	40	13	8.4	95	42	31.7	46.8	291.0	466.1625	29.1	52.9	33.4	-40.7	-40.0	-127.0	-167.0	-36.4	53.4
KNHF879	Haug Communications Inc.	Active	Shubert	NE	RICHARDSON	40	13	8.4	95	42	31.7	46.8	291.0	466.1500	29.1	53.0	33.4	-40.7	-40.0	-127.0	-167.0	-36.4	53.4
KNHF879	Haug Communications Inc.	Active	Shubert	NE	RICHARDSON	40	13	8.4	95	42	31.7	46.8	291.0	466.0250	29.1	53.3	33.4	-40.7	-40.0	-127.4	-167.4	-36.8	53.8
KNNK308	BLUESCOPE BUILDINGS NORTH AMERI	Active	SAINT JOSEPH	MO	BUCHANAN	39	43	8	94	53	31.9	46.8	146.4	467.2875	29.1	50.2	33.4	-40.7	-0.8	-124.3	-125.1	5.5	11.5
WQJN235	LOWE'S DISTRIBUTION CENTER	Active	SAINT JOSEPH	MO	BUCHANAN	39	43	12.4	94	53	15.7	46.9	145.9	468.3375	29.1	48.1	33.4	-40.7	-0.8	-122.2	-123.0	7.6	9.4
KZP461	NESTLE PURINA PETCARE COMPANY	Active	ST. JOSEPH	MO	BUCHANAN	39	43	37	94	52	10.9	47.1	143.9	469	29.3	47.0	33.5	-40.7	-0.6	-121.2	-121.8	8.8	8.2
KZP461	NESTLE PURINA PETCARE COMPANY	Active	ST. JOSEPH	MO	BUCHANAN	39	43	37	94	52	10.9	47.1	143.9	467.5	29.3	49.7	33.5	-40.7	-0.6	-123.9	-124.5	6.1	10.9
KZP461	NESTLE PURINA PETCARE COMPANY	Active	ST. JOSEPH	MO	BUCHANAN	39	43	37	94	52	10.9	47.1	143.9	467.2	29.3	50.4	33.5	-40.7	-0.6	-124.6	-125.2	5.4	11.6
WQJ1748	WINFIELD SOLUTIONS LLC	Active	ST. JOSEPH	MO	BUCHANAN	39	43	12.8	94	52	54.8	47.1	145.4	469.0125	29.3	47.0	33.5	-40.7	-0.8	-121.2	-121.9	8.7	8.3
WQJ1748	WINFIELD SOLUTIONS LLC	Active	ST. JOSEPH	MO	BUCHANAN	39	43	12.8	94	52	54.8	47.1	145.4	468.5375	29.3	47.7	33.5	-40.7	-0.8	-121.9	-122.7	7.9	9.1
WQJ1748	WINFIELD SOLUTIONS LLC	Active	ST. JOSEPH	MO	BUCHANAN	39	43	12.8	94	52	54.8	47.1	145.4	467.3625	29.3	50.0	33.5	-40.7	-0.8	-124.2	-124.9	5.7	11.3
WPBT353	LIFELINE FOODS	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	22	94	50	46.9	47.2	140.9	468.525	29.3	47.8	33.5	-40.7	-0.4	-121.9	-122.3	8.3	8.7
WPBT353	LIFELINE FOODS	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	22	94	50	46.9	47.2	140.9	467.525	29.3	49.7	33.5	-40.7	-0.4	-123.9	-124.2	6.4	10.6
WPBT353	LIFELINE FOODS	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	22	94	50	46.9	47.2	140.9	467.4500	29.3	49.8	33.5	-40.7	-0.4	-124.0	-124.4	6.2	10.8
WPBT353	LIFELINE FOODS	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	22	94	50	46.9	47.2	140.9	467.4000	29.3	50.0	33.5	-40.7	-0.4	-124.1	-124.5	6.1	10.9
WPBT353	LIFELINE FOODS	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	22	94	50	46.9	47.2	140.9	467.3250	29.3	50.1	33.5	-40.7	-0.4	-124.3	-124.7	5.9	11.1
WPGM205	ALBAUGH INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	43	21.7	94	52	21.9	47.4	144.4	467.0125	29.5	50.8	33.5	-40.7	-0.7	-125.0	-125.7	4.9	12.1
WPGM205	ALBAUGH INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	43	21.7	94	52	21.9	47.4	144.4	466.4625	29.5	52.2	33.5	-40.7	-0.7	-126.4	-127.0	3.6	13.4
WQXN690	DAILY'S PREMIUM MEATS LLC	Active	St. Joseph	MO	BUCHANAN	39	43	2.7	94	52	21.7	47.8	144.8	469.9125	29.7	46.0	33.6	-40.7	-0.7	-120.4	-121.0	9.6	7.4
WQXN690	DAILY'S PREMIUM MEATS LLC	Active	St. Joseph	MO	BUCHANAN	39	43	2.7	94	52	21.7	47.8	144.8	469.2375	29.7	46.7	33.6	-40.7	-0.7	-121.0	-121.7	8.9	8.1
WQXN690	DAILY'S PREMIUM MEATS LLC	Active	St. Joseph	MO	BUCHANAN	39	43	2.7	94	52	21.7	47.8	144.8	466.0500	29.7	53.2	33.6	-40.7	-0.7	-127.5	-128.2	2.4	14.6
WQJY722	Seaboard Energy Missouri, LLC DIV SEA	Active	SAINT JOSEPH	MO	BUCHANAN	39	42	54.5	94	52	34.9	47.9	145.3	468.8125	29.8	47.3	33.6	-40.7	-0.8	-121.6	-122.4	8.2	8.8
WQYH562	MFA Mill	Active	St. Joseph	MO	BUCHANAN	39	43	11.2	94	52	0.3	47.9	144.2	466.6375	29.8	51.7	33.6	-40.7	-0.7	-126.0	-126.7	3.9	13.1
WQYH562	MFA Mill	Active	St. Joseph	MO	BUCHANAN	39	43	11.2	94	52	0.3	47.9	144.2	466.4375	29.8	52.2	33.6	-40.7	-0.7	-126.5	-127.2	3.4	13.6
WRFG400	BIOZYME INC.	Active	SAINT JOSEPH	MO	BUCHANAN	39	42	45.2	94	52	36.5	48.1	145.6	469.2875	29.9	46.6	33.6	-40.7	-0.8	-121.0	-121.7	8.9	8.1

TABULATION OF LAND MOBILE RECORDS AND INTERFERENCE ANALYSIS
K14PQ-D, SAINT JOSEPH, MISSOURI, CHANNEL 14 (SIMPLE EMISSION MASK)

Callsign	Licensee Name	Status Code	Location City	Location State	Location County	Latitude Degrees	Latitude Minutes	Latitude Seconds	Longitude Degrees	Longitude Minutes	Longitude Seconds	Distance From Center (km)	Azimuth From Center	Assigned Frequency	Distance (mi.)	Simple Emission Mask (dB)	20*Log (Dist km) (dB)	Calc. Loss (no cross pol. disc.) (dB)	Az. Pat. Discrim. (dB)	IX (dBm) (w/o Az. Discrim.)	Total IX (w/ Az. Discrim.) (dBm)	Total IX (in dBu)	Margin (positive passes)
WRFG400	BIOZYME INC.	Active	SAINT JOSEPH	MO	BUCHANAN	39	42	45.2	94	52	36.5	48.1	145.6	469.0625	29.9	46.9	33.6	-40.7	-0.8	-121.3	-122.0	8.6	8.4
WPVK266	MIDWEST MOBILE RADIO SERVICE, INC	Active	Rock Port	MO	ATCHISON	40	25	40.9	95	31	20.6	48.6	325.2	469.2250	30.2	46.7	33.7	-40.7	-40.0	-121.2	-161.2	-30.6	47.6
WPVK266	MIDWEST MOBILE RADIO SERVICE, INC	Active	Rock Port	MO	ATCHISON	40	25	40.9	95	31	20.6	48.6	325.2	468.7250	30.2	47.4	33.7	-40.7	-40.0	-121.9	-161.9	-31.3	48.3
WPVK266	MIDWEST MOBILE RADIO SERVICE, INC	Active	Rock Port	MO	ATCHISON	40	25	40.9	95	31	20.6	48.6	325.2	468.5500	30.2	47.7	33.7	-40.7	-40.0	-122.2	-162.2	-31.6	48.6
WQPL826	NATIONAL FOOTBALL LEAGUE	Active	ST. JOSEPH	MO	BUCHANAN	39	45	42	94	47	15	48.8	134.5	469.625	30.3	46.2	33.8	-40.7	-0.1	-120.7	-120.8	9.8	7.2
WQPL826	NATIONAL FOOTBALL LEAGUE	Active	ST. JOSEPH	MO	BUCHANAN	39	45	42	94	47	15	48.8	134.5	469.525	30.3	46.3	33.8	-40.7	-0.1	-120.8	-120.9	9.7	7.3
WQPL826	NATIONAL FOOTBALL LEAGUE	Active	ST. JOSEPH	MO	BUCHANAN	39	45	42	94	47	15	48.8	134.5	467.5125	30.3	49.7	33.8	-40.7	-0.1	-124.2	-124.3	6.3	10.7
WQPL826	NATIONAL FOOTBALL LEAGUE	Active	ST. JOSEPH	MO	BUCHANAN	39	45	42	94	47	15	48.8	134.5	466.5125	30.3	52.0	33.8	-40.7	-0.1	-126.5	-126.6	4.0	13.0
WNJX700	ROCK PORT R 2 SCHOOLS	Active	ROCK PORT	MO	ATCHISON	40	25	54	95	32	25.9	49.8	324.0	468.3750	30.9	48.0	33.9	-40.7	-40.0	-122.7	-162.7	-32.1	49.1
WPZP749	VILLAGE OF SHALOM	Active	Kansas City	KS	JOHNSON	39	54	21	94	38	57	50	111.2	469.45	31.1	46.4	34.0	-40.7	-1.8	-121.1	-122.9	7.7	9.3
WQHI252	Nebraska Public Power District	Active	Brownville	NE	NEMAHA	40	21	42.8	95	38	28.7	50	310.7	467.3125	31.1	50.2	34.0	-40.7	-40.0	-124.8	-164.8	-34.2	51.2
WQHI252	Nebraska Public Power District	Active	Brownville	NE	NEMAHA	40	21	42.8	95	38	28.7	50	310.7	467.2125	31.1	50.4	34.0	-40.7	-40.0	-125.0	-165.0	-34.4	51.4
WQLF743	NEBRASKA PUBLIC POWER DISTRICT	Active	BROWNVILLE	NE	NEMAHA	40	21	44	95	38	34.5	50.1	310.7	469.2000	31.1	46.7	34.0	-40.7	-40.0	-121.4	-161.4	-30.8	47.8
WQWR389	VESTA - AMERICAN WIND TECHNOLOG	Active	PICKERING	MO	NODAWAY	40	27	36.5	94	53	26.6	50.5	30.6	469.075	31.4	46.9	34.1	-40.7	-40.0	-121.7	-161.7	-31.1	48.1
WPMB408	HEARTLAND REGIONAL MEDICAL CENT	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27.9	50.7	137.1	468.175	31.5	48.4	34.1	-40.7	-0.1	-123.2	-123.3	7.3	9.7
WPMB408	HEARTLAND REGIONAL MEDICAL CENT	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27.9	50.7	137.1	468.15	31.5	48.4	34.1	-40.7	-0.1	-123.2	-123.4	7.2	9.8
WPMB408	HEARTLAND REGIONAL MEDICAL CENT	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27.9	50.7	137.1	468.125	31.5	48.5	34.1	-40.7	-0.1	-123.3	-123.4	7.2	9.8
WPMB408	HEARTLAND REGIONAL MEDICAL CENT	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27.9	50.7	137.1	468.1000	31.5	48.5	34.1	-40.7	-0.1	-123.3	-123.5	7.1	9.9
WPMB408	HEARTLAND REGIONAL MEDICAL CENT	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27.9	50.7	137.1	468.075	31.5	48.6	34.1	-40.7	-0.1	-123.4	-123.5	7.1	9.9
WPMB408	HEARTLAND REGIONAL MEDICAL CENT	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27.9	50.7	137.1	468.05	31.5	48.6	34.1	-40.7	-0.1	-123.4	-123.6	7.0	10.0
WPMB408	HEARTLAND REGIONAL MEDICAL CENT	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27.9	50.7	137.1	468.025	31.5	48.7	34.1	-40.7	-0.1	-123.5	-123.6	7.0	10.0
WPMB408	HEARTLAND REGIONAL MEDICAL CENT	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27.9	50.7	137.1	468	31.5	48.7	34.1	-40.7	-0.1	-123.5	-123.7	6.9	10.1
WPMB408	HEARTLAND REGIONAL MEDICAL CENT	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27.9	50.7	137.1	467.975	31.5	48.8	34.1	-40.7	-0.1	-123.6	-123.7	6.9	10.1
WPMB408	HEARTLAND REGIONAL MEDICAL CENT	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27.9	50.7	137.1	467.95	31.5	48.8	34.1	-40.7	-0.1	-123.6	-123.8	6.8	10.2
WQPK558	HAUG COMMUNICATIONS INC	Active	POWHATTAN	KS	BROWN	39	45	42	95	37	57.9	50.7	227.6	468.6500	31.5	47.5	34.1	-40.7	-40.0	-122.4	-162.4	-31.8	48.8
WQPK558	HAUG COMMUNICATIONS INC	Active	POWHATTAN	KS	BROWN	39	45	42	95	37	57.9	50.7	227.6	466.6250	31.5	51.8	34.1	-40.7	-40.0	-126.5	-166.5	-35.9	52.9
WPEZ421	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27	50.8	137.1	469.9000	31.6	46.0	34.1	-40.7	-0.1	-120.9	-121.0	9.6	7.4
WPEZ421	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27	50.8	137.1	469.3500	31.6	46.5	34.1	-40.7	-0.1	-121.4	-121.5	9.1	7.9
WPEZ421	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27	50.8	137.1	468.3000	31.6	48.1	34.1	-40.7	-0.1	-123.0	-123.1	7.5	9.5
WPEZ421	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27	50.8	137.1	468.2375	31.6	48.3	34.1	-40.7	-0.1	-123.1	-123.2	7.4	9.6
WPEZ421	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27	50.8	137.1	468.2250	31.6	48.3	34.1	-40.7	-0.1	-123.1	-123.3	7.3	9.7
WPEZ421	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27	50.8	137.1	466.9750	31.6	50.9	34.1	-40.7	-0.1	-125.7	-125.9	4.7	12.3
WPEZ421	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27	50.8	137.1	466.8875	31.6	51.1	34.1	-40.7	-0.1	-125.9	-126.1	4.5	12.5
WPEZ421	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27	50.8	137.1	466.8250	31.6	51.3	34.1	-40.7	-0.1	-126.1	-126.2	4.4	12.6
WPLP358	MIDWEST MOBILE RADIO SERVICE, INC	Active	ST JOSEPH	MO	BUCHANAN	39	44	5	94	47	26.9	50.8	137.1	469.4000	31.6	46.5	34.1	-40.7	-0.1	-121.3	-121.5	9.1	7.9
WPLP358	MIDWEST MOBILE RADIO SERVICE, INC	Active	ST JOSEPH	MO	BUCHANAN	39	44	5	94	47	26.9	50.8	137.1	469.05	31.6	46.9	34.1	-40.7	-0.1	-121.8	-121.9	8.7	8.3
WPPG876	MIDWEST MOBILE RADIO SERVICE, INC	Active	ST JOSEPH	MO	BUCHANAN	39	44	5	94	47	26.9	50.8	137.1	469.4875	31.6	46.4	34.1	-40.7	-0.1	-121.2	-121.4	9.2	7.8
WPVU935	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27	50.8	137.1	469.5875	31.6	46.3	34.1	-40.7	-0.1	-121.1	-121.3	9.3	7.7
WPVU935	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27	50.8	137.1	468.9125	31.6	47.1	34.1	-40.7	-0.1	-122.0	-122.1	8.5	8.5
WPVU935	MIDWEST MOBILE RADIO SERVICE, INC	Active	SAINT JOSEPH	MO	BUCHANAN	39	44	5	94	47	27	50.8	137.1	468.3125	31.6	48.1	34.1	-40.7	-0.1	-123.0	-123.1	7.5	9.5
KAH380	SAINT JOSEPH, CITY OF	Active	SAINT JOSEPH	MO	BUCHANAN	39	43	56	94	47	25.9	51	137.3	465.6	31.7	54.4	34.2	-40.7	-0.1	-129.3	-129.4	1.2	15.8
WPJN430	ROSE, DOUG	Active	SAINT JOSEPH	MO	BUCHANAN	39	43	56	94	47	25.9	51.0	137.3	467.1000	31.7	50.6	34.2	-40.7	-0.1	-125.5	-125.6	5.0	12.0
WQPL755	Tyson Foods Inc	Active	ST JOSEPH	MO	BUCHANAN	39	45	23	94	45	32	51	133	467.15	31.7	50.5	34.2	-40.7	-0.1	-125.4	-125.5	5.1	11.9
WQPL955	Tyson Foods Inc	Active	ST JOSEPH	MO	BUCHANAN	39	45	23	94	45	32	51	133	467.15	31.7	50.5	34.2	-40.7	-0.1	-125.4	-125.5	5.1	11.9
WRAM697	TYSON FOODS INC	Active	St. Joseph	MO	BUCHANAN	39	45	23	94	45	32	51	133	466.575	31.7	51.9	34.2	-40.7	-0.1	-126.7	-126.9	3.7	13.3
WRBU414	GAVILON GROUP, LLC	Active	ROCK PORT	MO	ATCHISON	40	24	39.2	95	35	51.5	51.1	318.1	466.5875	31.8	51.9	34.2	-40.7	-40.0	-126.7	-166.7	-36.1	53.1
WRBU414	GAVILON GROUP, LLC	Active	ROCK PORT	MO	ATCHISON	40	24	39.2	95	35	51.5	51.1	318.1	466.5125	31.8	52.0	34.2	-40.7	-40.0	-126.9	-166.9	-36.3	53.3
WRON957	CLARIOS	Active	ST JOSEPH	MO	BUCHANAN	39	43	36	94	47	43	51.2	138.1	469.275	31.8	46.6	34.2	-40.7	-0.2	-121.5	-121.8	8.8	8.2

TABULATION OF LAND MOBILE RECORDS AND INTERFERENCE ANALYSIS
K14PQ-D, SAINT JOSEPH, MISSOURI, CHANNEL 14 (SIMPLE EMISSION MASK)

Callsign	Licensee Name	Status Code	Location City	Location State	Location County	Latitude Degrees	Latitude Minutes	Latitude Seconds	Longitude Degrees	Longitude Minutes	Longitude Seconds	Distance From Center (km)	Azimuth From Center	Assigned Frequency	Distance (mi.)	Simple Emission Mask (dB)	20*Log (Dist km) (dB)	Calc. Loss (no cross pol. disc.) (dB)	Az. Pat. Discrim. (dB)	IX (dBm) (w/o Az. Discrim.)	Total IX (w/ Az. Discrim.) (dBm)	Total IX (in dBu)	Margin (positive passes)
WRON957	CLARIOS	Active	ST JOSEPH	MO	BUCHANAN	39	43	36	94	47	43	51.2	138.1	469.0250	31.8	47.0	34.2	-40.7	-0.2	-121.9	-122.1	8.5	8.5
WRON957	CLARIOS	Active	ST JOSEPH	MO	BUCHANAN	39	43	36	94	47	43	51.2	138.1	466.125	31.8	53.0	34.2	-40.7	-0.2	-127.9	-128.1	2.5	14.5
WPQE318	MISSOURI, STATE OF	Active		MO	BUCHANAN	39	45	18	94	45	3.9	51.6	132.6	465.075	32.1	55.9	34.3	-40.7	-0.2	-130.8	-131.1	-0.5	17.5
WQYX831	JOHNSON CONTROLS	Active	ST. JOSEPH	MO	BUCHANAN	39	43	51.2	94	46	53.3	51.6	136.8	465.0000	32.1	56.2	34.3	-40.6	-0.1	-131.1	-131.1	-0.5	17.5
WRDL912	SCHUETZ CONTAINER SYSTEMS, INC.	Active	ST. JOSEPH	MO	BUCHANAN	39	44	6	94	46	18.2	51.9	135.7	469.3375	32.2	46.6	34.3	-40.7	0.0	-121.6	-121.6	9.0	8.0
WQQK693	Elanco US Inc.	Active	ST.JOSEPH	MO	BUCHANAN	39	43	40.9	94	46	42.4	52.0	136.8	466.6625	32.3	51.7	34.3	-40.7	-0.1	-126.7	-126.7	3.9	13.1
WQOG998	FAIRVIEW MILLS LLC	Active	FAIRVIEW	KS	BROWN	39	50	20.2	95	43	43.2	52.3	240.8	466.5625	32.5	51.9	34.4	-40.7	-40.0	-127.0	-167.0	-36.4	53.4
KNNL233	BELT HIGHWAY INVESTMENT CO DBA E	Active		MO	BUCHANAN	39	44	19	94	45	9.9	52.7	134.2	466.0625	32.7	53.2	34.4	-40.7	-0.1	-128.3	-128.4	2.2	14.8
WPKV266	MIDWEST MOBILE RADIO SERVICE, INC	Active	ELMO	MO	NODAWAY	40	33	12	95	7	19	54.1	6.5	469.9125	33.6	46.0	34.7	-40.7	-40.0	-121.4	-161.4	-30.8	47.8
WPKV266	MIDWEST MOBILE RADIO SERVICE, INC	Active	ELMO	MO	NODAWAY	40	33	12	95	7	19	54.1	6.5	469.8375	33.6	46.1	34.7	-40.7	-40.0	-121.5	-161.5	-30.9	47.9
WPKV266	MIDWEST MOBILE RADIO SERVICE, INC	Active	ELMO	MO	NODAWAY	40	33	12	95	7	19	54.1	6.5	468.4875	33.6	47.8	34.7	-40.7	-40.0	-123.2	-163.2	-32.6	49.6
WPKV266	MIDWEST MOBILE RADIO SERVICE, INC	Active	ELMO	MO	NODAWAY	40	33	12	95	7	19	54.1	6.5	466.4375	33.6	52.2	34.7	-40.7	-40.0	-127.6	-167.6	-37.0	54.0
WPFV331	wurtele, tom r	Active	BROWNVILLE	NE	NEMAHA	40	24	13	95	39	59	54.6	313	466.95	33.9	51.0	34.7	-40.7	-40.0	-126.4	-166.4	-35.8	52.8
WPCD696	WURTELE, TOM R	Active	BROWNVILLE	NE	NEMAHA	40	24	13	95	40	1	54.7	313	466.75	34.0	51.5	34.8	-40.7	-40.0	-126.9	-166.9	-36.3	53.3
WNRD958	WENGER MANUFACTURING INC	Active	SABETHA	KS	NEMAHA	39	54	12	95	47	55	54.8	250.4	469.975	34.1	46.0	34.8	-40.7	-40.0	-121.5	-161.5	-30.9	47.9
WNRD958	WENGER MANUFACTURING INC	Active	SABETHA	KS	NEMAHA	39	54	12	95	47	55	54.8	250.4	467.2	34.1	50.4	34.8	-40.7	-40.0	-125.9	-165.9	-35.3	52.3
WNLS722	ATCHISON HOSPITAL	Active		KS	ATCHISON	39	34	37	95	6	56.9	55.1	173.0	468.1750	34.2	48.4	34.8	-40.7	-4.6	-123.9	-128.6	2.0	15.0
WNLS722	ATCHISON HOSPITAL	Active		KS	ATCHISON	39	34	37	95	6	56.9	55.1	173.0	468.1500	34.2	48.4	34.8	-40.7	-4.6	-124.0	-128.6	2.0	15.0
WNLS722	ATCHISON HOSPITAL	Active		KS	ATCHISON	39	34	37	95	6	56.9	55.1	173.0	468.1250	34.2	48.5	34.8	-40.7	-4.6	-124.0	-128.6	2.0	15.0
WNLS722	ATCHISON HOSPITAL	Active		KS	ATCHISON	39	34	37	95	6	56.9	55.1	173.0	468.1000	34.2	48.5	34.8	-40.7	-4.6	-124.0	-128.7	1.9	15.1
WNLS722	ATCHISON HOSPITAL	Active		KS	ATCHISON	39	34	37	95	6	56.9	55.1	173	468.075	34.2	48.6	34.8	-40.7	-4.6	-124.1	-128.7	1.9	15.1
WNLS722	ATCHISON HOSPITAL	Active		KS	ATCHISON	39	34	37	95	6	56.9	55.1	173	468.05	34.2	48.6	34.8	-40.7	-4.6	-124.1	-128.8	1.8	15.2
WNLS722	ATCHISON HOSPITAL	Active		KS	ATCHISON	39	34	37	95	6	56.9	55.1	173	468.025	34.2	48.7	34.8	-40.7	-4.6	-124.2	-128.8	1.8	15.2
WNLS722	ATCHISON HOSPITAL	Active		KS	ATCHISON	39	34	37	95	6	56.9	55.1	173.0	468.0000	34.2	48.7	34.8	-40.7	-4.6	-124.2	-128.9	1.7	15.3
WNLS722	ATCHISON HOSPITAL	Active		KS	ATCHISON	39	34	37	95	6	56.9	55.1	173.0	467.9750	34.2	48.8	34.8	-40.7	-4.6	-124.3	-128.9	1.7	15.3
WNLS722	ATCHISON HOSPITAL	Active		KS	ATCHISON	39	34	37	95	6	56.9	55.1	173.0	467.9500	34.2	48.8	34.8	-40.7	-4.6	-124.3	-129.0	1.6	15.4
WPPF872	BYWATERS, BILLG-BYWATERS, LINDA M	Active	ST JOSEPH	MO	BUCHANAN	39	39	26	94	49	51.9	55.4	145.8	466.6500	34.4	51.7	34.9	-40.7	-0.8	-127.3	-128.0	2.6	14.4
WPKV204	HAUG COMMUNICATIONS INC	Active	PARNELL	MO	NODAWAY	40	25	17	94	43	20.9	56.0	45.6	468.6250	34.8	47.6	35.0	-40.7	-40.0	-123.3	-163.3	-32.7	49.7
WPKV204	HAUG COMMUNICATIONS INC	Active	PARNELL	MO	NODAWAY	40	25	17	94	43	20.9	56.0	45.6	468.3500	34.8	48.1	35.0	-40.7	-40.0	-123.7	-163.7	-33.1	50.1
WQPN549	Haug Communications Inc	Active	PARNELL	MO	NODAWAY	40	25	15	94	43	21	56	45.6	468.35	34.8	48.1	35.0	-40.7	-40.0	-123.7	-163.7	-33.1	50.1
WQPN549	Haug Communications Inc	Active	PARNELL	MO	NODAWAY	40	25	15	94	43	21	56	45.6	466.625	34.8	51.8	35.0	-40.7	-40.0	-127.4	-167.4	-36.8	53.8
WNLQ346	U S D 377	Active	LANCASTER	KS	ATCHISON	39	34	17	95	18	25.9	56.1	189.9	468.875	34.9	47.2	35.0	-40.7	-8.9	-122.9	-131.8	-1.2	18.2
WRCT583	ATCHISON TUBULAR SERVICES LLC	Active	ATCHISON	KS	ATCHISON	39	33	52.2	95	14	53.6	56.3	184.7	467.3750	35.0	50.0	35.0	-40.7	-7.4	-125.7	-133.2	-2.6	19.6
WPCS392	MGP INGREDIENTS INC	Active	ATCHISON	KS	ATCHISON	39	33	38.3	95	7	58.6	56.8	174.6	469.1875	35.3	46.7	35.1	-40.7	-4.9	-122.6	-127.4	3.2	13.8
WPCS392	MGP INGREDIENTS INC	Active	ATCHISON	KS	ATCHISON	39	33	38.3	95	7	58.6	56.8	174.6	466.6000	35.3	51.8	35.1	-40.7	-4.9	-127.6	-132.5	-1.9	18.9
WQLY831	BAKER SERVICES INC.	Active	LANCASTER	KS	ATCHISON	39	33	52	95	18	41.4	57.0	190.1	467.1875	35.4	50.4	35.1	-40.7	-9.2	-126.2	-135.5	-4.9	21.9
WRFQ903	BRADKEN	Active	ATCHISON	KS	ATCHISON	39	33	30.2	95	7	3.3	57.1	173.4	465	35.5	56.2	35.1	-40.6	-4.6	-131.9	-136.6	-6.0	23.0
WPUS207	MIDWEST MOBILE RADIO SERVICE, INC	Active	KING CITY	MO	GENTRY	40	4	3	94	31	22	57.3	90	466.7875	35.6	51.4	35.2	-40.7	-6.4	-127.2	-133.6	-3.0	20.0
WPUS207	MIDWEST MOBILE RADIO SERVICE, INC	Active	KING CITY	MO	GENTRY	40	4	3	94	31	22	57.3	90.0	466.6125	35.6	51.8	35.2	-40.7	-6.4	-127.6	-134.0	-3.4	20.4
WPUS207	MIDWEST MOBILE RADIO SERVICE, INC	Active	KING CITY	MO	GENTRY	40	4	3	94	31	22	57.3	90	466.4125	35.6	52.3	35.2	-40.7	-6.4	-128.1	-134.5	-3.9	20.9
WRTA581	Progress Rail Services Corporation	Active	Atchison	KS	ATCHISON	39	33	17	95	9	23	57.3	176.7	467.85	35.6	49.0	35.2	-40.7	-5.3	-124.9	-130.2	0.4	16.6
WPIN822	MIDWEST MOBILE RADIO SERVICE, INC	Active	KING CITY	MO	GENTRY	40	4	3	94	31	20	57.4	90	468.5	35.7	47.8	35.2	-40.7	-6.4	-123.7	-130.1	0.5	16.5
WPKV734	Bunge Milling, Inc.	Active	Atchison	KS	ATCHISON	39	32	47.6	95	10	17.5	58.1	178.0	468.3750	36.1	48.0	35.3	-40.7	-5.8	-124.0	-129.8	0.8	16.2
WPKV734	Bunge Milling, Inc.	Active	ATCHISON	KS	ATCHISON	39	32	48	95	10	15.9	58.1	178.0	466.3250	36.1	52.5	35.3	-40.7	-5.8	-128.5	-134.3	-3.7	20.7
WREZ676	Vestas Wind Systems	Active	Stanberry	MO	GENTRY	40	13	29.6	94	32	19.1	58.5	72.6	468.7625	36.4	47.4	35.3	-40.7	-11.9	-123.4	-135.4	-4.8	21.8
WRAA219	Lost Creek Wind, LLC	Active	King City	MO	DEKALB	39	58	53.2	94	31	6.5	58.6	99.4	468.75	36.4	47.4	35.4	-40.7	-4.2	-123.5	-127.7	2.9	14.1
WRAA219	Lost Creek Wind, LLC	Active	King City	MO	DEKALB	39	58	53.2	94	31	6.5	58.6	99.4	467.35	36.4	50.1	35.4	-40.7	-4.2	-126.1	-130.4	0.2	16.8
WPDV739	MIDWEST MOBILE RADIO SERVICE, INC	Active	RUSHVILLE	MO	BUCHANAN	39	33	24	95	1	48.9	58.7	166.1	468.4375	36.5	47.9	35.4	-40.7	-3.2	-124.0	-127.2	3.4	13.6

TABULATION OF LAND MOBILE RECORDS AND INTERFERENCE ANALYSIS
K14PQ-D, SAINT JOSEPH, MISSOURI, CHANNEL 14 (SIMPLE EMISSION MASK)

Callsign	Licensee Name	Status Code	Location City	Location State	Location County	Latitude Degrees	Latitude Minutes	Latitude Seconds	Longitude Degrees	Longitude Minutes	Longitude Seconds	Distance From Center (km)	Azimuth From Center	Assigned Frequency	Distance (mi.)	Simple Emission Mask (dB)	20*Log (Dist km) (dB)	Calc. Loss (no cross pol. disc.) (dB)	Az. Pat. Discrim. (dB)	IX (dBm) (w/o Az. Discrim.)	Total IX (w/ Az. Discrim.) (dBm)	Total IX (in dBu)	Margin (positive passes)
WPDV739	MIDWEST MOBILE RADIO SERVICE, INC	Active	RUSHVILLE	MO	BUCHANAN	39	33	24	95	1	48.9	58.7	166.1	467.1625	36.5	50.5	35.4	-40.7	-3.2	-126.6	-129.7	0.9	16.1
WPDV739	MIDWEST MOBILE RADIO SERVICE, INC	Active	RUSHVILLE	MO	BUCHANAN	39	33	24	95	1	48.9	58.7	166.1	467.1375	36.5	50.5	35.4	-40.7	-3.2	-126.6	-129.8	0.8	16.2
WPDV739	MIDWEST MOBILE RADIO SERVICE, INC	Active	RUSHVILLE	MO	BUCHANAN	39	33	24	95	1	48.9	58.7	166.1	466.6875	36.5	51.6	35.4	-40.7	-3.2	-127.7	-130.8	-0.2	17.2
WPVU935	MIDWEST MOBILE RADIO SERVICE, INC	Active	RUSHVILLE	MO	BUCHANAN	39	33	24	95	1	48.9	58.7	166.1	469.4375	36.5	46.4	35.4	-40.7	-3.2	-122.5	-125.7	4.9	12.1
WPVU935	MIDWEST MOBILE RADIO SERVICE, INC	Active	RUSHVILLE	MO	BUCHANAN	39	33	24	95	1	48.9	58.7	166.1	468.6625	36.5	47.5	35.4	-40.7	-3.2	-123.6	-126.8	3.8	13.2
WPVU935	MIDWEST MOBILE RADIO SERVICE, INC	Active	RUSHVILLE	MO	BUCHANAN	39	33	24	95	1	48.9	58.7	166.1	467.1125	36.5	50.6	35.4	-40.7	-3.2	-126.7	-129.8	0.8	16.2
WPMV768	BARTLETT GRAIN COMPANY LP	Active	Atchison	KS	ATCHISON	39	32	10.2	95	6	30.2	59.7	172.9	467.7625	37.1	49.2	35.5	-40.7	-4.4	-125.4	-129.8	0.8	16.2
WQJU245	Farmers City Wind, LLC	Active	Westboro	MO	ATCHISON	40	34	45.1	95	26	23.6	60.3	339.9	469.7000	37.5	46.2	35.6	-40.7	-40.0	-122.5	-162.5	-31.9	48.9
WQJU245	Farmers City Wind, LLC	Active	Westboro	MO	ATCHISON	40	34	45.1	95	26	23.6	60.3	339.9	468.5250	37.5	47.8	35.6	-40.7	-40.0	-124.1	-164.1	-33.5	50.5
WQJU245	Farmers City Wind, LLC	Active	Westboro	MO	ATCHISON	40	34	45.1	95	26	23.6	60.3	339.9	466.3750	37.5	52.4	35.6	-40.7	-40.0	-128.7	-168.7	-38.1	55.1
WPZZ645	HAUG COMMUNICATIONS INC	Active	SABETHA	KS	NEMAHA	39	56	49.9	95	53	2.2	60.4	257.2	469.9500	37.5	46.0	35.6	-40.7	-40.0	-122.4	-162.4	-31.8	48.8
WPZZ645	HAUG COMMUNICATIONS INC	Active	SABETHA	KS	NEMAHA	39	56	49.9	95	53	2.2	60.4	257.2	466.175	37.5	52.9	35.6	-40.7	-40.0	-129.2	-169.2	-38.6	55.6
WQPN549	Haug Communications Inc	Active	BRADDYVILLE	IA	PAGE	40	36	30	95	4	22	60.7	9.8	467.2	37.7	50.4	35.7	-40.7	-40.0	-126.8	-166.8	-36.2	53.2
WQXR843	HAUG COMMUNICATIONS INC	Active	Lancaster	KS	ATCHISON	39	31	29.1	95	18	33.2	61.3	189.2	467.0000	38.1	50.9	35.7	-40.7	-8.9	-127.3	-136.2	-5.6	22.6
WQXR843	HAUG COMMUNICATIONS INC	Active	Lancaster	KS	ATCHISON	39	31	29.1	95	18	33.2	61.3	189.2	466.7375	38.1	51.5	35.7	-40.7	-8.9	-127.9	-136.8	-6.2	23.2
WPKT303	SAC & FOX TRIBE OF MISSOURI	Active		KS	BROWN	39	41	58	95	43	42.9	61.4	228.1	465.1875	38.2	55.6	35.8	-40.7	-40.0	-132.0	-172.0	-41.4	58.4
WQOB938	HAUG COMMUNICATIONS INC	Active	ATCHISON	KS	ATCHISON	39	30	56	95	6	45	61.9	173.5	469.4125	38.5	46.5	35.8	-40.7	-4.6	-123.0	-127.7	2.9	14.1
WQOB938	HAUG COMMUNICATIONS INC	Active	ATCHISON	KS	ATCHISON	39	30	56	95	6	45	61.9	173.5	466.9000	38.5	51.1	35.8	-40.7	-4.6	-127.6	-132.3	-1.7	18.7
WNXL244	Cargill, Incorporated	Active	CUMMINGS	KS	ATCHISON	39	30	39	95	12	17.9	62	180.8	466.525	38.5	52.0	35.8	-40.7	-6.3	-128.5	-134.9	-4.3	21.3
WQJZ221	GBW Railcar Services	Active	CUMMINGS	KS	ATCHISON	39	30	37.7	95	12	23	62.1	180.9	466.35	38.6	52.5	35.9	-40.7	-6.3	-129.0	-135.3	-4.7	21.7
WRCW849	LAUMAN FARMS LLC	Active	Coin	IA	PAGE	40	38	26	95	21	42.4	65.0	347.5	469.4500	40.4	46.4	36.3	-40.7	-40.0	-123.4	-163.4	-32.8	49.8
KNJG646	Nebraska, State of	Active	PERU	NE	NEMAHA	40	28	33	95	44	59	65.3	314	465.3375	40.6	55.2	36.3	-40.7	-40.0	-132.1	-172.1	-41.5	58.5
KNJG646	Nebraska, State of	Active	PERU	NE	NEMAHA	40	28	33	95	44	59	65.3	314	465.2625	40.6	55.4	36.3	-40.7	-40.0	-132.3	-172.3	-41.7	58.7
WQOC751	AUBURN PUBLIC SCHOOLS DISTRICT #2	Active	Auburn	NE	NEMAHA	40	23	10	95	50	36	65.4	302.8	469.9625	40.6	46.0	36.3	-40.7	-40.0	-123.1	-163.1	-32.5	49.5
WRHV758	CITY OF HUMBOLDT	Active	HUMBOLDT	NE	RICHARDSON	40	11	50	95	56	52	65.7	282.7	467.2875	40.8	50.2	36.4	-40.7	-40.0	-127.3	-167.3	-36.7	53.7
WQTP398	EVANGELICAL LUTHERAN GOOD SAMA	Active	AUBURN	NE	NEMAHA	40	23	15	95	51	13	66.3	302.5	467.4375	41.2	49.9	36.4	-40.7	-40.0	-127.0	-167.0	-36.4	53.4
WQTP398	EVANGELICAL LUTHERAN GOOD SAMA	Active	AUBURN	NE	NEMAHA	40	23	15	95	51	13	66.3	302.5	467.3375	41.2	50.1	36.4	-40.7	-40.0	-127.2	-167.2	-36.6	53.6
WST228	Cox Communications Omaha, LLC	Active	Bellevue	NE	SARPY	40	9	40	95	57	47	66.3	279.1	469.2500	41.2	46.7	36.4	-40.7	-40.0	-123.8	-163.8	-33.2	50.2
WQOG998	FAIRVIEW MILLS LLC	Active	AUBURN	NE	NEMAHA	40	24	19	95	50	50.4	66.9	304.2	468.5375	41.6	47.7	36.5	-40.7	-40.0	-125.0	-165.0	-34.4	51.4
WQSS387	York, Ted	Active	Clarinda	IA	PAGE	40	40	29.3	95	8	6	67.4	4.3	466.2	41.9	52.8	36.6	-40.7	-40.0	-130.1	-170.1	-39.5	56.5
WQSS387	York, Ted	Active	Clarinda	IA	PAGE	40	40	29.3	95	8	6	67.4	4.3	466.075	41.9	53.2	36.6	-40.7	-40.0	-130.4	-170.4	-39.8	56.8
WROJ969	SPIEGEL FARMS LP	Active	HAMBURG	IA	FREMONT	40	35	5	95	37	51	68.1	327.3	469.0375	42.3	46.9	36.7	-40.7	-40.0	-124.3	-164.3	-33.7	50.7
WPCJ981	HAUG COMMUNICATIONS INC	Active	DEARBORN	MO	PLATTE	39	31	12	94	49	51.9	68.5	152.9	468.95	42.6	47.1	36.7	-40.7	-1.0	-124.5	-125.5	5.1	11.9
WQM738	FOWLER FARMS II, LLC	Active	NORTONVILLE	KS	ATCHISON	39	26	48	95	16	27.9	69.5	185.6	466.9625	43.2	51.0	36.8	-40.7	-7.7	-128.5	-136.2	-5.6	22.6
WQDG939	BARTLETT GRAIN COMPANY LP	Active	HAMBURG	IA	FREMONT	40	35	48.3	95	39	24.5	70.5	326.4	469.75	43.8	46.1	37.0	-40.7	-40.0	-123.8	-163.8	-33.2	50.2
WQDG939	BARTLETT GRAIN COMPANY LP	Active	HAMBURG	IA	FREMONT	40	35	48.3	95	39	24.5	70.5	326.4	469.4750	43.8	46.4	37.0	-40.7	-40.0	-124.1	-164.1	-33.5	50.5
WRJD958	EAST BUCHANAN CO. C-1 SCHOOL DIS	Active	GOWER	MO	CLINTON	39	36	33.8	94	35	44.4	72.4	134.8	469.3625	45.0	46.5	37.2	-40.7	-0.1	-124.4	-124.5	6.1	10.9
WRJD958	EAST BUCHANAN CO. C-1 SCHOOL DIS	Active	GOWER	MO	CLINTON	39	36	33.8	94	35	44.4	72.4	134.8	469.1375	45.0	46.8	37.2	-40.7	-0.1	-124.7	-124.8	5.8	11.2
WRJD958	EAST BUCHANAN CO. C-1 SCHOOL DIS	Active	GOWER	MO	CLINTON	39	36	33.8	94	35	44.4	72.4	134.8	469.0875	45.0	46.9	37.2	-40.7	-0.1	-124.8	-124.9	5.7	11.3
WRJD958	EAST BUCHANAN CO. C-1 SCHOOL DIS	Active	GOWER	MO	CLINTON	39	36	33.8	94	35	44.4	72.4	134.8	469.0375	45.0	46.9	37.2	-40.7	-0.1	-124.9	-124.9	5.7	11.3
WQNK495	SHAFFER COMMUNICATIONS, INC.	Active	HAMBURG	IA	FREMONT	40	37	55	95	38	56	73.4	328.5	468.8750	45.6	47.2	37.3	-40.7	-40.0	-125.2	-165.2	-34.6	51.6
WQNK495	SHAFFER COMMUNICATIONS, INC.	Active	HAMBURG	IA	FREMONT	40	37	55	95	38	56	73.4	328.5	467.1750	45.6	50.5	37.3	-40.7	-40.0	-128.5	-168.5	-37.9	54.9
WQNK495	SHAFFER COMMUNICATIONS, INC.	Active	HAMBURG	IA	FREMONT	40	37	55	95	38	56	73.4	328.5	466.6000	45.6	51.8	37.3	-40.7	-40.0	-129.8	-169.8	-39.2	56.2
KNID328	R & R MOUNT FARMS CORP	Active	Farragut	IA	FREMONT	40	41	11.6	95	31	7.3	73.8	338.3	466.8125	45.9	51.3	37.4	-40.7	-40.0	-129.4	-169.4	-38.8	55.8
WPWV760	MIDWEST MOBILE RADIO SERVICE, INC	Active	HAMBURG	IA	FREMONT	40	38	10	95	40	8	74.7	327.6	469.9125	46.4	46.0	37.5	-40.7	-40.0	-124.2	-164.2	-33.6	50.6
WPWV760	MIDWEST MOBILE RADIO SERVICE, INC	Active	HAMBURG	IA	FREMONT	40	38	10	95	40	8	74.7	327.6	469.2625	46.4	46.6	37.5	-40.7	-40.0	-124.8	-164.8	-34.2	51.2
WPWV760	MIDWEST MOBILE RADIO SERVICE, INC	Active	HAMBURG	IA	FREMONT	40	38	10	95	40	8	74.7	327.6	468.8375	46.4	47.2	37.5	-40.7	-40.0	-125.4	-165.4	-34.8	51.8
WPWV760	MIDWEST MOBILE RADIO SERVICE, INC	Active	HAMBURG	IA	FREMONT	40	38	10	95	40	8	74.7	327.6	467.1375	46.4	50.5	37.5	-40.7	-40.0	-128.7	-168.7	-38.1	55.1

TABULATION OF LAND MOBILE RECORDS AND INTERFERENCE ANALYSIS
K14PQ-D, SAINT JOSEPH, MISSOURI, CHANNEL 14 (SIMPLE EMISSION MASK)

Callsign	Licensee Name	Status Code	Location City	Location State	Location County	Latitude Degrees	Latitude Minutes	Latitude Seconds	Longitude Degrees	Longitude Minutes	Longitude Seconds	Distance From Center (km)	Azimuth From Center	Assigned Frequency	Distance (mi.)	Simple Emission Mask (dB)	20*Log (Dist km) (dB)	Calc. Loss (no cross pol. disc.) (dB)	Az. Pat. Discrim. (dB)	IX (dBm) (w/o Az. Discrim.)	Total IX (w/ Az. Discrim.) (dBm)	Total IX (in dBu)	Margin (positive passes)
WPAP446	HAUG COMMUNICATIONS INC	Active	JOHNSON	NE	NEMAHA	40	23	38	95	58	6	75	299	468.85	46.6	47.2	37.5	-40.7	-40.0	-125.4	-165.4	-34.8	51.8
WPAP446	HAUG COMMUNICATIONS INC	Active	JOHNSON	NE	NEMAHA	40	23	38	95	58	6	75	299	466.7	46.6	51.6	37.5	-40.7	-40.0	-129.8	-169.8	-39.2	56.2
WPDJ701	Johnson County Central Public Schools	Active	JOHNSON	NE	NEMAHA	40	23	38	95	58	6	75.0	299.0	466.5250	46.6	52.0	37.5	-40.7	-40.0	-130.2	-170.2	-39.6	56.6
WPJM246	KERNEN, RANDALL I	Active	BEDFORD	IA	TAYLOR	40	40	38	94	48	21.9	75.1	25.9	469.175	46.7	46.8	37.5	-40.7	-40.0	-125.0	-165.0	-34.4	51.4
WNLQ347	GIBSON FARMS INC	Active	CLARINDA	IA	PAGE	40	44	28	95	3	37.9	75.4	8.6	466.1000	46.9	53.1	37.5	-40.7	-40.0	-131.3	-171.3	-40.7	57.7
WPHH713	MOTHERSHEAD, NOBLE DBA T & R CO	Active	CLARINDA	IA	PAGE	40	44	28	95	3	37.9	75.4	8.6	466.1	46.9	53.1	37.5	-40.7	-40.0	-131.3	-171.3	-40.7	57.7
WQJW700	Jones, David	Active	Stewartsville	MO	CLINTON	39	39	40.1	94	29	19.8	75.5	126.8	469.3875	46.9	46.5	37.6	-40.7	-0.7	-124.8	-125.5	5.1	11.9
WNSE675	NSK CORPORATION	Active	CLARINDA	IA	PAGE	40	44	25	95	1	7.9	75.9	11.2	467.3	47.2	50.2	37.6	-40.7	-40.0	-128.5	-168.5	-37.9	54.9
WQRE791	H & H Trailers	Active	CLARINDA	IA	PAGE	40	44	26.4	95	1	6	76.0	11.3	467.9250	47.2	48.9	37.6	-40.7	-40.0	-127.2	-167.2	-36.6	53.6
WQZW924	NSK AMERICAS, INC.	Active	CLARINDA	IA	PAGE	40	44	46.2	95	1	20.3	76.5	10.9	467.4875	47.5	49.8	37.7	-40.7	-40.0	-128.1	-168.1	-37.5	54.5
WQZW924	NSK AMERICAS, INC.	Active	CLARINDA	IA	PAGE	40	44	50.9	95	1	13.1	76.7	11	467.5125	47.7	49.7	37.7	-40.7	-40.0	-128.1	-168.1	-37.5	54.5
WQZW924	NSK AMERICAS, INC.	Active	CLARINDA	IA	PAGE	40	44	50.9	95	1	13.1	76.7	11	467.4625	47.7	49.8	37.7	-40.7	-40.0	-128.2	-168.2	-37.6	54.6
WQZW924	NSK AMERICAS, INC.	Active	CLARINDA	IA	PAGE	40	44	50.9	95	1	13.1	76.7	11	467.1875	47.7	50.4	37.7	-40.7	-40.0	-128.8	-168.8	-38.2	55.2
WNAJ320	Haug Communications Inc.	Active	PAWNEE CITY	NE	PAWNEE	40	5	13	96	5	43	76.8	271.7	468.9750	47.7	47.0	37.7	-40.7	-40.0	-125.5	-165.5	-34.9	51.9
WNAJ320	Haug Communications Inc.	Active	PAWNEE CITY	NE	PAWNEE	40	5	13	96	5	43	76.8	271.7	466.2250	47.7	52.8	37.7	-40.7	-40.0	-131.2	-171.2	-40.6	57.6
KD34679	SENECA, CITY OF	Active		KS	NEMAHA	39	49	48	96	2	41	77.4	250.1	468.1750	48.1	48.4	37.8	-40.7	-40.0	-126.9	-166.9	-36.3	53.3
KD34679	SENECA, CITY OF	Active		KS	NEMAHA	39	49	48	96	2	41	77.4	250.1	468.15	48.1	48.4	37.8	-40.7	-40.0	-126.9	-166.9	-36.3	53.3
KD34679	SENECA, CITY OF	Active		KS	NEMAHA	39	49	48	96	2	41	77.4	250.1	468.1250	48.1	48.5	37.8	-40.7	-40.0	-127.0	-167.0	-36.4	53.4
KD34679	SENECA, CITY OF	Active		KS	NEMAHA	39	49	48	96	2	41	77.4	250.1	468.1000	48.1	48.5	37.8	-40.7	-40.0	-127.0	-167.0	-36.4	53.4
KD34679	SENECA, CITY OF	Active		KS	NEMAHA	39	49	48	96	2	41	77.4	250.1	468.0750	48.1	48.6	37.8	-40.7	-40.0	-127.0	-167.0	-36.4	53.4
KD34679	SENECA, CITY OF	Active		KS	NEMAHA	39	49	48	96	2	41	77.4	250.1	468.0500	48.1	48.6	37.8	-40.7	-40.0	-127.1	-167.1	-36.5	53.5
KD34679	SENECA, CITY OF	Active		KS	NEMAHA	39	49	48	96	2	41	77.4	250.1	468.0250	48.1	48.7	37.8	-40.7	-40.0	-127.1	-167.1	-36.5	53.5
KD34679	SENECA, CITY OF	Active		KS	NEMAHA	39	49	48	96	2	41	77.4	250.1	468.0000	48.1	48.7	37.8	-40.7	-40.0	-127.2	-167.2	-36.6	53.6
WQKA981	MIDAMERICAN ENERGY COMPANY	Active	SHENANDOAH	IA	PAGE	40	45	29	95	20	40	77.5	350.6	467.2250	48.2	50.3	37.8	-40.7	-40.0	-128.8	-168.8	-38.2	55.2
WQKA981	MIDAMERICAN ENERGY COMPANY	Active	SHENANDOAH	IA	PAGE	40	45	29	95	20	40	77.5	350.6	467.0250	48.2	50.8	37.8	-40.7	-40.0	-129.3	-169.3	-38.7	55.7
WQAT632	CLARINDA ACADEMY	Active	CLARINDA	IA	PAGE	40	45	33	95	2	5	77.8	10	467.425	48.3	49.9	37.8	-40.7	-40.0	-128.4	-168.4	-37.8	54.8
WQPK558	HAUG COMMUNICATIONS INC	Active	SENECA	KS	NEMAHA	39	50	25.6	96	3	18.7	77.8	251.1	468.3500	48.3	48.1	37.8	-40.7	-40.0	-126.6	-166.6	-36.0	53.0
WPWF225	KOCH & COMPANY	Active	SENECA	KS	NEMAHA	39	50	9.3	96	3	25.2	78.1	250.8	466.4500	48.5	52.2	37.9	-40.7	-40.0	-130.7	-170.7	-40.1	57.1
KYG600	IOWA, STATE OF	Active	CLARINDA	IA	PAGE	40	45	49.1	95	2	17.8	78.2	9.7	465.1250	48.6	55.8	37.9	-40.7	-40.0	-134.3	-174.3	-43.7	60.7
WNMN410	JOHNSON BROCK SCHOOLS	Active	JOHNSON	NE	NEMAHA	40	24	48	95	59	50	78.2	299.6	468.2000	48.6	48.3	37.9	-40.7	-40.0	-126.9	-166.9	-36.3	53.3
WQHD752	GREEN PLAINS RENEWABLE ENERGY, IN	Active	SHENANDOAH	IA	FREMONT	40	45	26	95	23	46	78.2	347.5	468.6000	48.6	47.6	37.9	-40.7	-40.0	-126.2	-166.2	-35.6	52.6
WQHD752	GREEN PLAINS RENEWABLE ENERGY, IN	Active	SHENANDOAH	IA	FREMONT	40	45	24.5	95	23	43.1	78.2	347.5	466.9125	48.6	51.1	37.9	-40.7	-40.0	-129.6	-169.6	-39.0	56.0
KYF271	MID AMERICA REGIONAL COUNCIL EM	Active		MO	JACKSON	39	33	38	94	33	38.8	78.4	136.1	468.1750	48.7	48.4	37.9	-40.7	-0.1	-127.0	-127.0	3.6	13.4
KYF271	MID AMERICA REGIONAL COUNCIL EM	Active		MO	JACKSON	39	33	38	94	33	38.8	78.4	136.1	468.1500	48.7	48.4	37.9	-40.7	-0.1	-127.0	-127.1	3.5	13.5
KYF271	MID AMERICA REGIONAL COUNCIL EM	Active		MO	JACKSON	39	33	38	94	33	38.8	78.4	136.1	468.1250	48.7	48.5	37.9	-40.7	-0.1	-127.1	-127.1	3.5	13.5
KYF271	MID AMERICA REGIONAL COUNCIL EM	Active		MO	JACKSON	39	33	38	94	33	38.8	78.4	136.1	468.1000	48.7	48.5	37.9	-40.7	-0.1	-127.1	-127.2	3.4	13.6
KYF271	MID AMERICA REGIONAL COUNCIL EM	Active		MO	JACKSON	39	33	38	94	33	38.8	78.4	136.1	468.075	48.7	48.6	37.9	-40.7	-0.1	-127.2	-127.2	3.4	13.6
KYF271	MID AMERICA REGIONAL COUNCIL EM	Active		MO	JACKSON	39	33	38	94	33	38.8	78.4	136.1	468.0500	48.7	48.6	37.9	-40.7	-0.1	-127.2	-127.3	3.3	13.7
KYF271	MID AMERICA REGIONAL COUNCIL EM	Active		MO	JACKSON	39	33	38	94	33	38.8	78.4	136.1	468.0250	48.7	48.7	37.9	-40.7	-0.1	-127.3	-127.3	3.3	13.7
KYF271	MID AMERICA REGIONAL COUNCIL EM	Active		MO	JACKSON	39	33	38	94	33	38.8	78.4	136.1	468.0000	48.7	48.7	37.9	-40.7	-0.1	-127.3	-127.4	3.2	13.8
KYF271	MID AMERICA REGIONAL COUNCIL EM	Active		MO	JACKSON	39	33	38	94	33	38.8	78.4	136.1	467.9750	48.7	48.8	37.9	-40.7	-0.1	-127.4	-127.4	3.2	13.8
KYF271	MID AMERICA REGIONAL COUNCIL EM	Active		MO	JACKSON	39	33	38	94	33	38.8	78.4	136.1	467.9500	48.7	48.8	37.9	-40.7	-0.1	-127.4	-127.5	3.1	13.9
WQYV654	First Wireless, Inc.	Active	Nebraska City	NE	OTOE	40	37	13	95	46	32	78.6	321.4	469.825	48.8	46.1	37.9	-40.7	-40.0	-124.7	-164.7	-34.1	51.1
WRMD601	Boral Resources LLC	Active	Nebraska City	NE	OTOE	40	37	13	95	46	32	78.6	321.4	469.725	48.8	46.2	37.9	-40.7	-40.0	-124.8	-164.8	-34.2	51.2
KJO850	NEMAHA COUNTY CO OPERATIVE ASS	Active	CORNING	KS	NEMAHA	39	50	1	96	3	46	78.7	250.7	468.675	48.9	47.5	37.9	-40.7	-40.0	-126.1	-166.1	-35.5	52.5
WQAQ661	MCCORMICK DISTILLING CO	Active	WESTON	MO	PLATTE	39	23	54.4	94	52	41.6	79.3	160	468.325	49.3	48.1	38.0	-40.7	-2.0	-126.8	-128.8	1.8	15.2
WPWF225	KOCH & COMPANY	Active	SENECA	KS	NEMAHA	39	50	34.2	96	5	0.1	80.0	251.9	469.1750	49.7	46.8	38.1	-40.7	-40.0	-125.5	-165.5	-34.9	51.9
WPWF225	KOCH & COMPANY	Active	SENECA	KS	NEMAHA	39	50	34.2	96	5	0.1	80.0	251.9	467.9250	49.7	48.9	38.1	-40.7	-40.0	-127.6	-167.6	-37.0	54.0

TABULATION OF LAND MOBILE RECORDS AND INTERFERENCE ANALYSIS
K14PQ-D, SAINT JOSEPH, MISSOURI, CHANNEL 14 (SIMPLE EMISSION MASK)

Callsign	Licensee Name	Status Code	Location City	Location State	Location County	Latitude Degrees	Latitude Minutes	Latitude Seconds	Longitude Degrees	Longitude Minutes	Longitude Seconds	Distance From Center (km)	Azimuth From Center	Assigned Frequency	Distance (mi.)	Simple Emission Mask (dB)	20*Log (Dist km) (dB)	Calc. Loss (no cross pol. disc.) (dB)	Az. Pat. Discrim. (dB)	IX (dBm) (w/o Az. Discrim.)	Total IX (w/ Az. Discrim.) (dBm)	Total IX (in dBu)	Margin (positive passes)
WQFUS28	MIDWEST MOBILE RADIO SERVICE INC	Active	GRANT CITY	MO	WORTH	40	28	24.7	94	24	52.7	80.1	55.6	469.7000	49.8	46.2	38.1	-40.7	-26.4	-125.0	-151.4	-20.8	37.8
WQFUS28	MIDWEST MOBILE RADIO SERVICE INC	Active	GRANT CITY	MO	WORTH	40	28	24.7	94	24	52.7	80.1	55.6	468.6875	49.8	47.5	38.1	-40.7	-26.4	-126.3	-152.6	-22.0	39.0
WQFUS28	MIDWEST MOBILE RADIO SERVICE INC	Active	GRANT CITY	MO	WORTH	40	28	24.7	94	24	52.7	80.1	55.6	467.1625	49.8	50.5	38.1	-40.7	-26.4	-129.3	-155.6	-25.0	42.0
WQFUS28	MIDWEST MOBILE RADIO SERVICE INC	Active	GRANT CITY	MO	WORTH	40	28	24.7	94	24	52.7	80.1	55.6	466.4875	49.8	52.1	38.1	-40.7	-26.4	-130.9	-157.2	-26.6	43.6
WQFUS28	MIDWEST MOBILE RADIO SERVICE INC	Active	GRANT CITY	MO	WORTH	40	28	24.7	94	24	52.7	80.1	55.6	465.8375	49.8	53.8	38.1	-40.7	-26.4	-132.5	-158.9	-28.3	45.3
KNJG816	SHEPHERD FARMS, INC	Active	CLIFTON HILL	MO	RANDOLPH	39	27	35	95	42	7.9	80.5	212.8	466.7000	50.0	51.6	38.1	-40.7	-20.9	-130.4	-151.2	-20.6	37.6
WQTM840	HERMESCH, JACOB	Active	GOFF	KS	NEMAHA	39	39	41.7	95	58	34	80.8	236	467.05	50.2	50.7	38.1	-40.7	-40.0	-129.6	-169.6	-39.0	56.0
WPYF318	PELLA CORPORATION-SHENANDOAH C	Active	Shenandoah	IA	PAGE	40	47	7.7	95	23	4.9	81.1	348.6	467.3750	50.4	50.0	38.2	-40.7	-40.0	-128.9	-168.9	-38.3	55.3
WPYF318	PELLA CORPORATION-SHENANDOAH C	Active	Shenandoah	IA	PAGE	40	47	7.7	95	23	4.9	81.1	348.6	466.8625	50.4	51.2	38.2	-40.7	-40.0	-130.1	-170.1	-39.5	56.5
WNWE306	WORTH, COUNTY OF	Active	GRANT CITY	MO	WORTH	40	29	9	94	24	29.9	81.3	55	467.975	50.5	48.8	38.2	-40.7	-26.4	-127.7	-154.0	-23.4	40.4
WPHH713	MOTHERSHEAD, NOBLE DBA T & R CO	Active	BENTON	IA	RINGGOLD	40	42	10	94	42	40.9	81.4	30	466.1	50.6	53.1	38.2	-40.7	-40.0	-132.0	-172.0	-41.4	58.4
WNSQ965	TRIANGLE ENTERPRISES CORPORATION	Active	SIDNEY	IA	FREMONT	40	41	15	95	42	52	81.6	327.5	469.775	50.7	46.1	38.2	-40.7	-40.0	-125.1	-165.1	-34.5	51.5
WQQA671	USD 336 HOLTON	Active	Holton	KS	JACKSON	39	28	1.9	95	44	55.9	82	215.4	469.8	51.0	46.1	38.3	-40.7	-26.4	-125.1	-151.5	-20.9	37.9
WQQA671	USD 336 HOLTON	Active	Holton	KS	JACKSON	39	28	1.9	95	44	55.9	82	215.4	469.675	51.0	46.2	38.3	-40.7	-26.4	-125.2	-151.6	-21.0	38.0
WQQA671	USD 336 HOLTON	Active	HOLTON	KS	JACKSON	39	28	1.9	95	44	55.9	82	215.4	468.925	51.0	47.1	38.3	-40.7	-26.4	-126.1	-152.5	-21.9	38.9
WPHH713	MOTHERSHEAD, NOBLE DBA T & R CO	Active	BEDFORD	IA	TAYLOR	40	43	30	94	44	50.9	82.1	27.3	466.1	51.0	53.1	38.3	-40.7	-40.0	-132.1	-172.1	-41.5	58.5
WPHH713	MOTHERSHEAD, NOBLE DBA T & R CO	Active	BEDFORD	IA	TAYLOR	40	43	30	94	44	50.9	82.1	27.3	466.1	51.0	53.1	38.3	-40.7	-40.0	-132.1	-172.1	-41.5	58.5
WRDY221	OHIO SEMITRONICS OF CA, INC	Active	T. LEAVENWORTH	KS	LEAVENWORTH	39	21	29	94	55	14	82.4	163.4	467.2625	51.2	50.3	38.3	-40.7	-2.6	-129.3	-131.8	-1.2	18.2
WQCB686	BANNER CREEK, LLC	Active	HOLTON	KS	JACKSON	39	27	0	95	43	36.8	82.5	213.6	466.9250	51.3	51.0	38.3	-40.7	-22.3	-130.1	-152.4	-21.8	38.8
WQKE989	MISSOURI, STATE OF	Active	EDGERTON	MO	PLATTE	39	28	11.4	94	37	14.2	82.8	143.5	465.05	51.4	56.0	38.4	-40.6	-0.6	-135.0	-135.6	-5.0	22.0
WQLC682	MIDAMERICAN ENERGY COMPANY	Active	PERCIVAL	IA	FREMONT	40	41	20	95	45	12.2	83.5	325.7	469.15	51.9	46.8	38.4	-40.7	-40.0	-126.0	-166.0	-35.4	52.4
WQLC682	MIDAMERICAN ENERGY COMPANY	Active	PERCIVAL	IA	FREMONT	40	41	20	95	45	12.2	83.5	325.7	467.1	51.9	50.6	38.4	-40.7	-40.0	-129.8	-169.8	-39.2	56.2
WQLC682	MIDAMERICAN ENERGY COMPANY	Active	PERCIVAL	IA	FREMONT	40	41	20	95	45	12.2	83.5	325.7	466.475	51.9	52.1	38.4	-40.7	-40.0	-131.2	-171.2	-40.6	57.6
WQQP868	USD 338 VALLEY FALLS SCHOOLS	Active	VALLEY FALLS	KS	JEFFERSON	39	20	43	95	27	44.9	83.6	196	469.2	51.9	46.7	38.4	-40.7	-11.3	-125.9	-137.2	-6.6	23.6
WRDA898	TURECEK, DAVID MATTHEW	Active	Valley Falls	KS	JEFFERSON	39	21	24.4	95	30	29.4	83.6	198.8	468.525	51.9	47.8	38.4	-40.7	-11.9	-126.9	-138.8	-8.2	25.2
WRDA898	TURECEK, DAVID MATTHEW	Active	Valley Falls	KS	JEFFERSON	39	21	24.4	95	30	29.4	83.6	198.8	467.25	51.9	50.3	38.4	-40.7	-11.9	-129.4	-141.4	-10.8	27.8
WRNV597	SCHAAF BROTHERS EQUIPMENT CORP	Active	Farragut	IA	FREMONT	40	47	12.6	95	30	53.3	84.1	341.3	466.8375	52.3	51.2	38.5	-40.7	-40.0	-130.4	-170.4	-39.8	56.8
WNSQ965	TRIANGLE ENTERPRISES CORPORATION	Active	SIDNEY	IA	FREMONT	40	45	20	95	39	1	85.4	333.3	469.775	53.1	46.1	38.6	-40.7	-40.0	-125.5	-165.5	-34.9	51.9
WRMN793	HEARTLAND CO-OP	Active	NEBRASKA CITY	NE	OTOE	40	40	0	95	50	6	85.7	321.0	469.8750	53.3	46.1	38.7	-40.7	-40.0	-125.4	-165.4	-34.8	51.8
KNBF742	toms radio	Active	NEBRASKA CITY	NE	OTOE	40	40	0	95	50	7	85.8	320.9	469.0250	53.3	47.0	38.7	-40.7	-40.0	-126.4	-166.4	-35.8	52.8
WNCD708	REESE, ROBERT	Active	NEBRASKA CITY	NE	OTOE	40	40	0	95	50	7	85.8	320.9	468.4750	53.3	47.8	38.7	-40.7	-40.0	-127.2	-167.2	-36.6	53.6
WNP5447	toms radio	Active	NEBRASKA CITY	NE	OTOE	40	40	0	95	50	7	85.8	320.9	466.4250	53.3	52.3	38.7	-40.7	-40.0	-131.6	-171.6	-41.0	58.0
WNUX739	wurtele, tom r	Active	NEBRASKA CITY	NE	OTOE	40	40	0	95	50	7	85.8	320.9	469.8	53.3	46.1	38.7	-40.7	-40.0	-125.5	-165.5	-34.9	51.9
WPFM896	wurtele, tom r	Active	NEBRASKA	NE	OTOE	40	40	0	95	50	7	85.8	320.9	469.975	53.3	46.0	38.7	-40.7	-40.0	-125.4	-165.4	-34.8	51.8
WZP207	wurtele, tom r	Active	NEBRASKA CITY	NE	OTOE	40	40	0	95	50	7	85.8	320.9	468.475	53.3	47.8	38.7	-40.7	-40.0	-127.2	-167.2	-36.6	53.6
WRQW284	FREMONT, COUNTY OF	Active	SIDNEY	IA	FREMONT	40	45	48	95	38	34.9	85.9	333.9	467.4875	53.4	49.8	38.7	-40.7	-40.0	-129.1	-169.1	-38.5	55.5
WRQW284	FREMONT, COUNTY OF	Active	SIDNEY	IA	FREMONT	40	45	48	95	38	34.9	85.9	333.9	467.2125	53.4	50.4	38.7	-40.7	-40.0	-129.7	-169.7	-39.1	56.1
WQTN555	Gavilon Grain LLC	Active	Nebraska City	NE	OTOE	40	40	21.5	95	50	21	86.5	321.1	466.2750	53.7	52.6	38.7	-40.7	-40.0	-132.1	-172.1	-41.5	58.5
KNEH564	PLATTE COUNTY R3 SCHOOL DISTRICT	Active	PLATTE CITY	MO	PLATTE	39	21	30.5	94	46	16.9	86.9	155.3	466.5250	54.0	52.0	38.8	-40.7	-1.1	-131.5	-132.6	-2.0	19.0
WRAC232	Gavilon Group LLC	Active	Nebraska City	NE	OTOE	40	40	39	95	51	4.4	87.5	320.8	467.4125	54.4	49.9	38.8	-40.7	-40.0	-129.5	-169.5	-38.9	55.9
WRAC232	Gavilon Group LLC	Active	Nebraska City	NE	OTOE	40	40	39	95	51	4.4	87.5	320.8	467.2125	54.4	50.4	38.8	-40.7	-40.0	-129.9	-169.9	-39.3	56.3
KWH479	NORTHLAND REGIONAL AMBULANCE	Active		MO	PLATTE	39	21	23	94	45	27.9	87.6	154.6	467.9625	54.4	48.8	38.9	-40.7	-1.1	-128.3	-129.4	1.2	15.8
WQXR843	HAUG COMMUNICATIONS INC	Active	Nebraska City	NE	OTOE	40	36	34	95	57	9	88.0	313.3	468.9875	54.7	47.0	38.9	-40.7	-40.0	-126.6	-166.6	-36.0	53.0
WQXR843	HAUG COMMUNICATIONS INC	Active	Nebraska City	NE	OTOE	40	36	34	95	57	9	88	313.3	466.825	54.7	51.3	38.9	-40.7	-40.0	-130.9	-170.9	-40.3	57.3
WRF673	Otoe County Emergency Management	Active	NEBRASKA CITY	NE	OTOE	40	40	30.8	95	51	58	88.2	320.0	465.6125	54.8	54.4	38.9	-40.7	-40.0	-134.0	-174.0	-43.4	60.4
WQBS347	Cargill Meat Solutions Corporation	Active	NEBRASKA CITY	NE	OTOE	40	40	1	95	52	49	88.3	319.1	469.7375	54.9	46.1	38.9	-40.7	-40.0	-125.8	-165.8	-35.2	52.2
WQBS347	Cargill Meat Solutions Corporation	Active	NEBRASKA CITY	NE	OTOE	40	40	1	95	52	49	88.3	319.1	468.7625	54.9	47.4	38.9	-40.7	-40.0	-127.0	-167.0	-36.4	53.4
WQBS347	Cargill Meat Solutions Corporation	Active	NEBRASKA CITY	NE	OTOE	40	40	1	95	52	49	88.3	319.1	468.3375	54.9	48.1	38.9	-40.7	-40.0	-127.7	-167.7	-37.1	54.1

TABULATION OF LAND MOBILE RECORDS AND INTERFERENCE ANALYSIS
K14PQ-D, SAINT JOSEPH, MISSOURI, CHANNEL 14 (SIMPLE EMISSION MASK)

Callsign	Licensee Name	Status Code	Location City	Location State	Location County	Latitude Degrees	Latitude Minutes	Latitude Seconds	Longitude Degrees	Longitude Minutes	Longitude Seconds	Distance From Center (km)	Azimuth From Center	Assigned Frequency	Distance (mi.)	Simple Emission Mask (dB)	20*Log (Dist km) (dB)	Calc. Loss (no cross pol. disc.) (dB)	Az. Pat. Discrim. (dB)	IX (dBm) (w/o Az. Discrim.)	Total IX (w/ Az. Discrim.) (dBm)	Total IX (in dBu)	Margin (positive passes)
KNHP689	JACKSON HEIGHTS SCHOOLS USC 335	Active	CIRCLEVILLE	KS	JACKSON	39	30	24	95	55	37	88.5	225.2	466.6750	55.0	51.6	38.9	-40.7	-40.0	-131.3	-171.3	-40.7	57.7
WQSV392	The National Arbor Day Foundation	Active	NEBRASKA CITY	NE	OTOE	40	41	32	95	52	54	90.4	320.2	466.0500	56.2	53.2	39.1	-40.7	-40.0	-133.0	-173.0	-42.4	59.4
WRDC617	Nebraska City Public Schools	Active	NEBRASKA CITY	NE	OTOE	40	42	3.3	95	52	10.4	90.5	321.1	466.9875	56.2	50.9	39.1	-40.7	-40.0	-130.7	-170.7	-40.1	57.1
WRDC617	Nebraska City Public Schools	Active	NEBRASKA CITY	NE	OTOE	40	42	3.3	95	52	10.4	90.5	321.1	466.5625	56.2	51.9	39.1	-40.7	-40.0	-131.7	-171.7	-41.1	58.1
WPHU724	wurtele, tom r	Active	NEBRASKA CITY	NE	OTOE	40	40	58	95	56	17	92.8	317.5	466.125	57.7	53.0	39.4	-40.7	-40.0	-133.1	-173.1	-42.5	59.5
WPKC955	WURTELE, tom R	Active	NEBRASKA CITY	NE	OTOE	40	40	58	95	56	17	92.8	317.5	466.1	57.7	53.1	39.4	-40.7	-40.0	-133.1	-173.1	-42.5	59.5
WPZX839	SAINT LUKE'S NORTHLAND HOSPITAL	Active	Smithville	MO	CLAY	39	22	41	94	34	59	93	145.6	468.35	57.8	48.1	39.4	-40.7	-0.8	-128.1	-128.9	1.7	15.3
KNNJ619	SMITHVILLE R-II SCHOOL DISTRICT	Active	SMITHVILLE	MO	CLAY	39	22	20	94	34	50.8	93.6	145.7	469.1000	58.2	46.9	39.4	-40.7	-0.8	-127.0	-127.8	2.8	14.2
WPVK266	MIDWEST MOBILE RADIO SERVICE, INC	Active	LATHROP	MO	CLINTON	39	32	17.7	94	20	0.1	94.5	128.5	468.4375	58.7	47.9	39.5	-40.7	-0.5	-128.1	-128.6	2.0	15.0
WPVK266	MIDWEST MOBILE RADIO SERVICE, INC	Active	LATHROP	MO	CLINTON	39	32	17.7	94	20	0.1	94.5	128.5	466.3875	58.7	52.4	39.5	-40.7	-0.5	-132.5	-133.1	-2.5	19.5
WPWX533	MIDWEST MOBILE RADIO SERVICE, INC	Active	LATHROP	MO	CLINTON	39	32	17.7	94	20	0.1	94.5	128.5	469.8875	58.7	46.0	39.5	-40.7	-0.5	-126.3	-126.8	3.8	13.2
WPWX533	MIDWEST MOBILE RADIO SERVICE, INC	Active	LATHROP	MO	CLINTON	39	32	17.7	94	20	0.1	94.5	128.5	469.6375	58.7	46.2	39.5	-40.7	-0.5	-126.5	-127.0	3.6	13.4
WPWX533	MIDWEST MOBILE RADIO SERVICE, INC	Active	LATHROP	MO	CLINTON	39	32	17.7	94	20	0.1	94.5	128.5	468.8375	58.7	47.2	39.5	-40.7	-0.5	-127.5	-128.0	2.6	14.4
WPWX533	MIDWEST MOBILE RADIO SERVICE, INC	Active	LATHROP	MO	CLINTON	39	32	17.7	94	20	0.1	94.5	128.5	466.7625	58.7	51.4	39.5	-40.7	-0.5	-131.6	-132.1	-1.5	18.5
WQOB938	HAUG COMMUNICATIONS INC	Active	HAVENSVILLE	KS	POTTAWATOMIE	39	27	0	96	2	34	100.1	226.7	468.975	62.2	47.0	40.0	-40.7	-40.0	-127.8	-167.8	-37.2	54.2
WQOB938	HAUG COMMUNICATIONS INC	Active	HAVENSVILLE	KS	POTTAWATOMIE	39	27	0	96	2	34	100.1	226.7	466.9875	62.2	50.9	40.0	-40.7	-40.0	-131.6	-171.6	-41.0	58.0
WPUD326	KEARNEY BOARD OF EDUCATION REOF	Active	KEARNEY	MO	CLAY	39	21	51.4	94	21	42.5	106.0	137.5	466.5000	65.9	52.1	40.5	-40.7	-0.1	-133.3	-133.4	-2.8	19.8
WPUD326	KEARNEY BOARD OF EDUCATION REOF	Active	KEARNEY	MO	CLAY	39	21	29	94	21	39	106.6	137.7	469.9500	66.2	46.0	40.6	-40.7	-0.1	-127.3	-127.5	3.1	13.9
WQYU960	OTOE COUNTY SCHOOL DISTRICT 27	Active	Syracuse	NE	OTOE	40	43	24	96	7	24	107.2	313.0	466.0750	66.6	53.2	40.6	-40.7	-40.0	-134.4	-174.4	-43.8	60.8
WPUD326	KEARNEY BOARD OF EDUCATION REOF	Active	KEARNEY	MO	CLAY	39	21	10	94	21	12	107.4	137.6	469.0125	66.7	47.0	40.6	-40.7	-0.1	-128.3	-128.5	2.1	14.9
WQNK495	SHAFFER COMMUNICATIONS, INC.	Active	NEBRASKA CITY	NE	OTOE	40	46	42.1	96	5	57	109.9	316.1	468.6375	68.3	47.6	40.8	-40.7	-40.0	-129.1	-169.1	-38.5	55.5
WQNK495	SHAFFER COMMUNICATIONS, INC.	Active	NEBRASKA CITY	NE	OTOE	40	46	42.1	96	5	57	109.9	316.1	468.2125	68.3	48.3	40.8	-40.7	-40.0	-129.8	-169.8	-39.2	56.2
WQNK495	SHAFFER COMMUNICATIONS, INC.	Active	NEBRASKA CITY	NE	OTOE	40	46	42.1	96	5	57	109.9	316.1	467.0750	68.3	50.7	40.8	-40.7	-40.0	-132.2	-172.2	-41.6	58.6
WQNK495	SHAFFER COMMUNICATIONS, INC.	Active	NEBRASKA CITY	NE	OTOE	40	46	42.1	96	5	57	109.9	316.1	466.8000	68.3	51.3	40.8	-40.7	-40.0	-132.8	-172.8	-42.2	59.2