

Technical Exhibit  
K275CI  
190m RC-AMSL 53m AGL  
250 Watts

TABLE OF CONTENTS

	Technical Statement
Figure 1	Interference Study Table
Figure 2	Section 74.1204
Figure 3	AM Fill-In Translator Eligibility

### Interference Compliance

Contour protection, as required by C.F.R. Section 74.1204 to co-channel and first, second and third adjacent channels is demonstrated herein by Figures 1 and 2.

The instant application seeks a waiver of the second adjacent minimum distance separation requirement of 47 C.F.R. Section 74.1204. The proposed facility will not interfere with any authorized radio service, specifically, KEZK-FM and KLOU.

Figure 2 shows a tabular output of the interfering 169 dBu F(50,10) contour of the proposed facility with respect to KEZK-FM. The closest the contour comes to the ground is 16.2m at approximately 66m from the tower. There are no tall buildings within the area.

Figure 2-1 shows a tabular output of the interfering 118.9 dBu F(50,10) contour of the proposed facility with respect to KLOU. The closest the interfering contour comes to the ground is 14.2m at approximately 70m from the tower. There are no tall buildings within the area.

All contours plotted in exhibits are displayed in accordance with the propagation prediction curves of Section 73.333.

### Mattoon Waiver Technical Factors

A waiver of CFR 74.1233(a) is requested. The proposed facility is mutually exclusive with the currently licensed facility and will rebroadcast KHOJ AM 1460 (see Figure 3).

### AM Fill-In Eligibility

The instant facility complies with the requirements of a cross band fill-in translator, i.e., the 60 dBu F(50,50) contour of the instant facility is within both the 2 mV/m contour of its intended Primary station, KHOJ, and within 40 km of KHOJ's transmit site (see Figure 3).

### RF Electromagnetic Exposure Analysis

The proposed facility will not have a significant environmental impact and complies with maximum permissible radio frequency electromagnetic exposure limits for a controlled environment, in accordance with OET Bulletin No. 65.

Using a worst case assumption of maximum downward radiation ( $F=1.0$ ) the RF exposure at 2m above ground level is less than 1.% of the controlled standard. This is inconsequential when added to existing RF on the tower.

The site is fenced. The power will be reduced or shut off to allow necessary access to the tower.

Figure 1

K275CI Minor Change in Licensed Facility										
REFERENCE		CH#	275D	-	102.9 MHz,	Pwr= 0.25 kW,	HAAT= 48.2 M,	COR= 190 M	DISPLAY DATES	
38 50 06.2 N.		Average Protected F(50-50)= 9.08 km								DATA 12-28-15
90 28 05.9 W.		Omni-directional								SEARCH 01-11-16
CH CITY	CALL	TYPE STATE	ANT AZI <--	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
273CO St. Louis	KEZK-FM	LIC_CX MO	156.8 336.9	31.52 BLH20110919ADL	38 34 27.7 90 19 31.5	100.000 309	9.9 462	71.4 Cbs Radio Stations Inc.	12.9	-41.0*
277C1 St. Louis	KLOU	LIC_CX MO	156.8 336.9	31.52 BLH20150311AAF	38 34 27.7 90 19 31.4	90.000 309	9.6 462	70.3 Citicasters Licenses, Inc.	13.2	-39.9*
275D Troy	<del>K275CI</del>	LI_C_ MO	301.1 120.7	51.23 BMPFT20151211ABN	39 04 18.2 90 58 36.2	0.250	46.3 297	13.4 Covenant Network	-5.2	4.2
275C1 Cape Girardeau	KEZS-FM	LIC_CN MO	153.2 333.8	177.51 BLH19870501KC	37 24 23.0 89 33 44.0	100.000 289	169.7 435	70.4 Mrr License Lic	-0.8	82.7
275L1 St. Louis	KYGV-LP	CP_ MO	144.2 324.3	33.29 BNPL20131112B0F	38 35 31.0 90 14 39.0	0.020 66	209	10.6 International Institute Of	3.5	
222C0 St. Louis	WILL-FM	LIC_CY MO	171.1 351.2	39.64 BLH19890707KC	38 28 56.0 90 23 53.0	100.000 300	42.2 466	12.8 St. Louis Fcc License Sub,	24.5R	15.1M
275D Hermann	K275BU	CP_C_ MO	249.1 68.6	71.89 BMPFT20150810ADG	38 36 05.2 91 14 28.0	0.250	39.5 231	11.6 Covenant Network	22.3	29.9
275B Decatur	WSOY-FM	LIC_CN IL	48.0 229.0	175.08 BLH19990512KB	39 52 41.0 88 56 32.0	54.000 135	139.1 339	65.5 Neuhoff Media Decatur, LI c	25.6	57.9
276D Troy	K276GC	CP_DC_ MO	301.1 120.7	51.23 BMPFT20151028AEM	39 04 18.2 90 58 36.2	0.011	7.6 297	5.4 Covenant Network	33.5	33.7
275D Jacksonville	W275BM	LIC_DC_ IL	13.3 193.5	101.32 BLFT20120327AAE	39 43 18.0 90 11 45.0	0.250 80	6.4 269	2.0 Morgan County Broadcasting	84.7	60.5
275C1 Marshall	KMMO-FM	LIC_CN MO	278.8 97.1	240.27 BLH19931213KB	39 08 03.0 93 13 19.0	100.000 116	148.2 337	52.7 Missouri Valley Broadcasti	81.8	151.9
276A Rolla	AL7107	RSV-A_ MO	229.8 49.0	148.81 RM10567*	37 57 50.0 91 45 54.0	6.000 100	39.8 395	25.9	99.9	112.6
276L1 Vandalia	WEMV-LP	CP_ IL	83.7 264.5	118.80 BMPL20140219ACA	38 56 41.8 89 06 09.8	0.051 42	201	100.6 Elijah Message Ministry	100.2	
276A Rolla	KDAA	LIC_CX MO	226.7 45.9	154.07 BLH20060710AAT	37 52 39.0 91 44 45.0	2.050 174	42.6 480	28.4 Kttr-kznn, Inc.	102.7	114.8
274B1 Macomb	WJEQ	LIC_CN IL	356.0 175.9	176.37 BLH19980508KH	40 25 03.0 90 36 51.0	10.000 156	58.4 352	45.2 Virden Broadcasting Corp.	107.7	113.5
275L1 Quincy	WQIN-LP	LIC_ IL	327.2 146.6	148.03 BLL20021219AAK	39 57 02.0 91 24 33.0	0.060 35	205	121.9 3 Angels Broadcasting Mess	109.8	
277D Hannibal	K277CF	CP_C_ MO	321.3 140.7	128.07 BNPFT20130325ABJ	39 43 47.8 91 24 19.5	0.170 96	0.9 270	9.7 Covenant Network	117.1	114.8
277D Fulton	K277BZ	CP_C_ MO	272.2 91.3	127.74 BMPFT20130723ABH	38 52 12.4 91 56 34.8	0.250 31	1.1 271	9.3 Covenant Network	116.3	117.2
272C3 Columbia	KBXR	LIC_NC_ MO	277.8 96.7	157.58 BLH20000208ABM	39 00 52.0 92 16 32.0	3.500 261	3.2 498	37.0 Cumulus Licensing LI c	144.1	119.5

Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM  
 In & Out distances between contours are shown at closest points. Reference zone= West Zone, Co to 3rd adjacent.  
 All separation margins (if shown) include rounding.  
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)  
 ""\*""affixed to 'IN' or 'OUT' values = site inside restricted contour.  
 Reference station has protected zone issue: AM tower

Figure 2

K275CI Troy, MO  
 74.1204(d) Showing  
 Translator or LPFM Maximum Licensed ERP = 0.25  
 Translator or LPFM Antenna Height AG = 53 Meters  
 K275CI Antenna Model = 6812B 2 1-2

Protected Station's Contour = 79.38373 dBu  
 Translator's or LPFM's full Interference contour 119.38373

Review Azimuth = 0 Degrees True  
 Relative Field on the horizon at Review Azimuth = 1.000  
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW  
 Distance between stations = 31.5 km  
 Protected Station= KEZK-F, 100 kW, 462.2 M Meters COR AMSL

Depression Angle From Horizon(Deg) (m)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground
00.00	1.0	1.0	0.2500	119.0648	119.0648	053.000
01.00	0.999	1.0	0.2495	118.9458	118.9277	050.924
02.00	0.998	1.0	0.2490	118.8267	118.7543	048.853
03.00	0.995	1.0	0.2475	118.4695	118.3072	046.800
04.00	0.995	1.0	0.2475	118.4695	118.1809	044.736
05.00	0.987	1.0	0.2435	117.5170	117.0698	042.758
06.00	0.981	1.0	0.2406	116.8026	116.1627	040.791
07.00	0.975	1.0	0.2377	116.0882	115.2229	038.852
08.00	0.967	1.0	0.2338	115.1357	114.0152	036.976
09.00	0.958	1.0	0.2294	114.0641	112.6598	035.156
10.00	0.949	1.0	0.2252	112.9925	111.2759	033.379
11.00	0.938	1.0	0.2200	111.6828	109.6309	031.690
12.00	0.927	1.0	0.2148	110.3731	107.9612	030.052
13.00	0.915	1.0	0.2093	108.9443	106.1521	028.493
14.00	0.902	1.0	0.2034	107.3965	104.2063	027.018
15.00	0.888	1.0	0.1971	105.7296	102.1269	025.635
16.00	0.874	1.0	0.1910	104.0627	100.0315	024.316
17.00	0.858	1.0	0.1840	102.1576	097.6938	023.132
18.00	0.843	1.0	0.1777	100.3717	095.4591	021.983
19.00	0.826	1.0	0.1706	098.3475	092.9894	020.981
20.00	0.809	1.0	0.1636	096.3235	090.5144	020.055
21.00	0.791	1.0	0.1564	094.1803	087.9249	019.249

22.00	0.773	1.0	0.1494	092.0371	085.3353	018.522
23.00	0.754	1.0	0.1421	089.7749	082.6382	017.922
24.00	0.735	1.0	0.1351	087.5127	079.9468	017.405
25.00	0.716	1.0	0.1282	085.2504	077.2631	016.972
26.00	0.696	1.0	0.1211	082.8691	074.4823	016.673
27.00	0.676	1.0	0.1142	080.4878	071.7152	016.459
28.00	0.656	1.0	0.1076	078.1065	068.9640	016.331
29.00	0.636	1.0	0.1011	075.7252	066.2308	016.288
30.00	0.615	1.0	0.0946	073.2249	063.4146	016.388
31.00	0.594	1.0	0.0882	070.7245	060.6227	016.574
32.00	0.574	1.0	0.0824	068.3432	057.9583	016.784
33.00	0.553	1.0	0.0765	065.8428	055.2205	017.139
34.00	0.532	1.0	0.0708	063.3425	052.5133	017.579
35.00	0.512	1.0	0.0655	060.9612	049.9365	018.034
36.00	0.491	1.0	0.0603	058.4608	047.2958	018.638
37.00	0.471	1.0	0.0555	056.0795	044.7871	019.250
38.00	0.451	1.0	0.0509	053.6982	042.3148	019.940
39.00	0.431	1.0	0.0464	051.3169	039.8808	020.705
40.00	0.411	1.0	0.0422	048.9356	037.4869	021.545
41.00	0.391	1.0	0.0382	046.5543	035.1350	022.458
42.00	0.372	1.0	0.0346	044.2921	032.9155	023.363
43.00	0.353	1.0	0.0312	042.0299	030.7387	024.336
44.00	0.335	1.0	0.0281	039.8867	028.6921	025.292
45.00	0.317	1.0	0.0251	037.7436	026.6887	026.311
46.00	0.3	1.0	0.0225	035.7195	024.8128	027.306
47.00	0.282	1.0	0.0199	033.5763	022.8990	028.444
48.00	0.266	1.0	0.0177	031.6712	021.1922	029.464
49.00	0.249	1.0	0.0155	029.6471	019.4503	030.625
50.00	0.234	1.0	0.0137	027.8612	017.9088	031.657
51.00	0.219	1.0	0.0120	026.0752	016.4097	032.736
52.00	0.204	1.0	0.0104	024.2892	014.9539	033.860
53.00	0.19	1.0	0.0090	022.6223	013.6145	034.933
54.00	0.176	1.0	0.0077	020.9554	012.3173	036.047
55.00	0.163	1.0	0.0066	019.4076	011.1317	037.102
56.00	0.151	1.0	0.0057	017.9788	010.0536	038.095
57.00	0.139	1.0	0.0048	016.5500	009.0138	039.120
58.00	0.127	1.0	0.0040	015.1212	008.0130	040.176
59.00	0.116	1.0	0.0034	013.8115	007.1135	041.161
60.00	0.106	1.0	0.0028	012.6209	006.3104	042.070
61.00	0.096	1.0	0.0023	011.4302	005.5415	043.003
62.00	0.087	1.0	0.0019	010.3586	004.8631	043.854
63.00	0.079	1.0	0.0016	009.4061	004.2703	044.619
64.00	0.071	1.0	0.0013	008.4536	003.7058	045.402
65.00	0.063	1.0	0.0010	007.5011	003.1701	046.202
66.00	0.056	1.0	0.0008	006.6676	002.7120	046.909
67.00	0.05	1.0	0.0006	005.9532	002.3261	047.520

68.00	0.043	1.0	0.0005	005.1198	001.9179	048.253
69.00	0.038	1.0	0.0004	004.5245	001.6214	048.776
70.00	0.033	1.0	0.0003	003.9291	001.3438	049.308
71.00	0.028	1.0	0.0002	003.3338	001.0854	049.848
72.00	0.024	1.0	0.0001	002.8576	000.8830	050.282
73.00	0.02	1.0	0.0001	002.3813	000.6962	050.723
74.00	0.017	1.0	0.0001	002.0241	000.5579	051.054
75.00	0.014	1.0	0.0000	001.6669	000.4314	051.390
76.00	0.011	1.0	0.0000	001.3097	000.3168	051.729
77.00	0.009	1.0	0.0000	001.0716	000.2411	051.956
78.00	0.007	1.0	0.0000	000.8335	000.1733	052.185
79.00	0.005	1.0	0.0000	000.5953	000.1136	052.416
80.00	0.004	1.0	0.0000	000.4763	000.0827	052.531
81.00	0.003	1.0	0.0000	000.3572	000.0559	052.647
82.00	0.002	1.0	0.0000	000.2381	000.0331	052.764
83.00	0.001	1.0	0.0000	000.1191	000.0145	052.882
84.00	0.001	1.0	0.0000	000.1191	000.0124	052.882
85.00	0.0	1.0	0.0000	000.0119	000.0010	052.988
86.00	0.0	1.0	0.0000	000.0119	000.0008	052.988
87.00	0.0	1.0	0.0000	000.0119	000.0006	052.988
88.00	0.0	1.0	0.0000	000.0119	000.0004	052.988
89.00	0.0	1.0	0.0000	000.0119	000.0002	052.988
90.00	0.0	1.0	0.0000	000.0119	000.0000	052.988

X-Field™ By V-Soft Communications®LLC

Figure 2-1

K275CI Troy, MO  
 74.1204(d) Showing  
 Translator Maximum Licensed ERP = 0.25  
 Translator Antenna Height AG = 53 Meters  
 K275CI Antenna Model = 6812B 2 1-2

Protected Station's Contour = 78.91759 dBu  
 Translator's full Interference contour 118.91759

Review Azimuth = 0 Degrees True  
 Relative Field on the horizon at Review Azimuth = 1.000  
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW  
 Distance between stations = 31.5 km  
 Protected Station= KLOU, 90 kW, 462 M Meters COR AMSL

Depression Angle From Horizon(Deg) (m)	Vertical Relative Field	Horizontal Relative Field	ERP (kw) Contour Dep. Angle(m)	Dist to IX Along Contour(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground
00.00	1.0	1.0	0.2500	125.6292	125.6292	053.000
01.00	0.999	1.0	0.2495	125.5035	125.4844	050.810
02.00	0.998	1.0	0.2490	125.3779	125.3015	048.624
03.00	0.995	1.0	0.2475	125.0010	124.8297	046.458
04.00	0.995	1.0	0.2475	125.0010	124.6965	044.280
05.00	0.987	1.0	0.2435	123.9960	123.5242	042.193
06.00	0.981	1.0	0.2406	123.2422	122.5671	040.118
07.00	0.975	1.0	0.2377	122.4884	121.5754	038.072
08.00	0.967	1.0	0.2338	121.4834	120.3011	036.093
09.00	0.958	1.0	0.2294	120.3527	118.8710	034.173
10.00	0.949	1.0	0.2252	119.2221	117.4108	032.297
11.00	0.938	1.0	0.2200	117.8402	115.6751	030.515
12.00	0.927	1.0	0.2148	116.4582	113.9134	028.787
13.00	0.915	1.0	0.2093	114.9507	112.0045	027.142
14.00	0.902	1.0	0.2034	113.3175	109.9515	025.586
15.00	0.888	1.0	0.1971	111.5587	107.7574	024.126
16.00	0.874	1.0	0.1910	109.7999	105.5464	022.735
17.00	0.858	1.0	0.1840	107.7898	103.0799	021.485
18.00	0.843	1.0	0.1777	105.9054	100.7220	020.273
19.00	0.826	1.0	0.1706	103.7697	098.1162	019.216
20.00	0.809	1.0	0.1636	101.6340	095.5047	018.239
21.00	0.791	1.0	0.1564	099.3727	092.7724	017.388

22.00	0.773	1.0	0.1494	097.1114	090.0401	016.621
23.00	0.754	1.0	0.1421	094.7244	087.1943	015.988
24.00	0.735	1.0	0.1351	092.3374	084.3545	015.443
25.00	0.716	1.0	0.1282	089.9505	081.5228	014.985
26.00	0.696	1.0	0.1211	087.4379	078.5887	014.670
27.00	0.676	1.0	0.1142	084.9253	075.6690	014.445
28.00	0.656	1.0	0.1076	082.4127	072.7661	014.310
29.00	0.636	1.0	0.1011	079.9002	069.8822	014.264
30.00	0.615	1.0	0.0946	077.2619	066.9108	014.369
31.00	0.594	1.0	0.0882	074.6237	063.9650	014.566
32.00	0.574	1.0	0.0824	072.1111	061.1537	014.787
33.00	0.553	1.0	0.0765	069.4729	058.2649	015.162
34.00	0.532	1.0	0.0708	066.8347	055.4085	015.626
35.00	0.512	1.0	0.0655	064.3221	052.6896	016.106
36.00	0.491	1.0	0.0603	061.6839	049.9033	016.743
37.00	0.471	1.0	0.0555	059.1713	047.2563	017.390
38.00	0.451	1.0	0.0509	056.6588	044.6477	018.117
39.00	0.431	1.0	0.0464	054.1462	042.0795	018.925
40.00	0.411	1.0	0.0422	051.6336	039.5536	019.811
41.00	0.391	1.0	0.0382	049.1210	037.0721	020.774
42.00	0.372	1.0	0.0346	046.7341	034.7302	021.729
43.00	0.353	1.0	0.0312	044.3471	032.4334	022.755
44.00	0.335	1.0	0.0281	042.0858	030.2740	023.765
45.00	0.317	1.0	0.0251	039.8244	028.1601	024.840
46.00	0.3	1.0	0.0225	037.6888	026.1808	025.889
47.00	0.282	1.0	0.0199	035.4274	024.1614	027.090
48.00	0.266	1.0	0.0177	033.4174	022.3606	028.166
49.00	0.249	1.0	0.0155	031.2817	020.5226	029.391
50.00	0.234	1.0	0.0137	029.3972	018.8962	030.480
51.00	0.219	1.0	0.0120	027.5128	017.3144	031.619
52.00	0.204	1.0	0.0104	025.6284	015.7784	032.805
53.00	0.19	1.0	0.0090	023.8695	014.3650	033.937
54.00	0.176	1.0	0.0077	022.1107	012.9964	035.112
55.00	0.163	1.0	0.0066	020.4776	011.7454	036.226
56.00	0.151	1.0	0.0057	018.9700	010.6079	037.273
57.00	0.139	1.0	0.0048	017.4625	009.5107	038.355
58.00	0.127	1.0	0.0040	015.9549	008.4548	039.469
59.00	0.116	1.0	0.0034	014.5730	007.5056	040.509
60.00	0.106	1.0	0.0028	013.3167	006.6583	041.467
61.00	0.096	1.0	0.0023	012.0604	005.8470	042.452
62.00	0.087	1.0	0.0019	010.9297	005.1312	043.350
63.00	0.079	1.0	0.0016	009.9247	004.5057	044.157
64.00	0.071	1.0	0.0013	008.9197	003.9101	044.983
65.00	0.063	1.0	0.0010	007.9146	003.3449	045.827
66.00	0.056	1.0	0.0008	007.0352	002.8615	046.573
67.00	0.05	1.0	0.0006	006.2815	002.4544	047.218



68.00	0.043	1.0	0.0005	005.4021	002.0236	047.991
69.00	0.038	1.0	0.0004	004.7739	001.7108	048.543
70.00	0.033	1.0	0.0003	004.1458	001.4179	049.104
71.00	0.028	1.0	0.0002	003.5176	001.1452	049.674
72.00	0.024	1.0	0.0001	003.0151	000.9317	050.132
73.00	0.02	1.0	0.0001	002.5126	000.7346	050.597
74.00	0.017	1.0	0.0001	002.1357	000.5887	050.947
75.00	0.014	1.0	0.0000	001.7588	000.4552	051.301
76.00	0.011	1.0	0.0000	001.3819	000.3343	051.659
77.00	0.009	1.0	0.0000	001.1307	000.2543	051.898
78.00	0.007	1.0	0.0000	000.8794	000.1828	052.140
79.00	0.005	1.0	0.0000	000.6281	000.1199	052.383
80.00	0.004	1.0	0.0000	000.5025	000.0873	052.505
81.00	0.003	1.0	0.0000	000.3769	000.0590	052.628
82.00	0.002	1.0	0.0000	000.2513	000.0350	052.751
83.00	0.001	1.0	0.0000	000.1256	000.0153	052.875
84.00	0.001	1.0	0.0000	000.1256	000.0131	052.875
85.00	0.0	1.0	0.0000	000.0126	000.0011	052.987
86.00	0.0	1.0	0.0000	000.0126	000.0009	052.987
87.00	0.0	1.0	0.0000	000.0126	000.0007	052.987
88.00	0.0	1.0	0.0000	000.0126	000.0004	052.987
89.00	0.0	1.0	0.0000	000.0126	000.0002	052.987
90.00	0.0	1.0	0.0000	000.0126	000.0000	052.987

X-Field™ By V-Soft Communications®LLC

