

KTWU-DT and WIBW-DT. For this reason, KSQA has filed this Petition to change channel. In the attached engineering statement, KSQA demonstrates that the proposed operation on Channel 22 avoids the interference problems which exist on Channel 12. A facility operating on Channel 22 will place the requisite 48 dBu city-grade contour over the entire city of license, will meet the Commission's interference requirements to all post-transition DTV facilities (and Class A LPTV stations), and satisfies the Commission's human exposure guidelines to non-ionizing radiation.

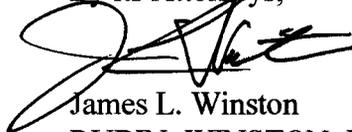
If this Petition is granted, KSQA intends to file a construction permit application for, and to construct, the new channel 22 digital facilities.

Therefore, KSQA requests that the Commission take the necessary steps to permit the proposed substitution of Channel 22 for KSQA's current digital post-transition Channel 12 allotment and that the Commission amend the final DTV Table of Allotments accordingly.

Respectfully Submitted,

KSQA, LLC

By its Attorneys,



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December 30, 2010

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of KSQA, LLC, permittee of digital television station KSQA-DT on Channel 12 in Topeka, Kansas, in support of its Petition for Rulemaking to substitute Channel 22 for Channel 12 in the Commission's Digital Television Table of Allotments.

Due to the fact that there are post-transition full-power digital television stations operating on both channels first-adjacent to that of KSQA-DT (Channels 11 and 13) in Topeka, and since neither of those two stations (KTWU-DT and WIBW-DT, respectively) utilizes the same transmitter site, it is extremely difficult for the owners of KSQA-DT to find a suitable site from which to operate a Channel 12 facility with an effective radiated power, antenna height and antenna pattern similar to those of KTWU-DT and WIBW-DT. As a result, we have conducted a comprehensive channel search and have determined that Channel 22 can be utilized as a full-power digital television channel in Topeka, Kansas.

Attached is the engineering report for an FCC application for the proposed KSQA-DT operation on Channel 22. In it, the operating parameters of the station are provided. As shown, operation on the new channel with the specified parameters will result in a facility that places the requisite 48 dBu city-grade contour over the entire city of license, meets the FCC's interference requirements to all post-transition DTV facilities (and Class A LPTV stations), and satisfies the Commission's human exposure guidelines to non-ionizing electromagnetic radiation.

SMITH AND FISHER

Accordingly, it is respectfully requested that the Commission substitute the allotment channel for KSQA-DT (with the specified operating parameters) in the digital television allotment table in Section 73.622(i) of the FCC Rules as follows:

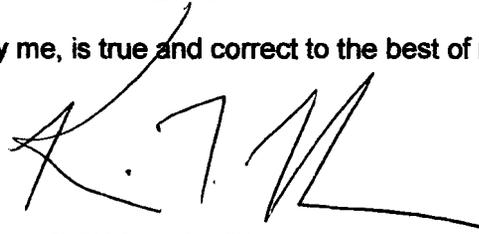
Present Allotment

Topeka, KS
11, 12, 13, 27, 49

Proposed Allotment

Topeka, KS
11, 13, 22, 27, 49

I declare, under penalty of perjury, that the foregoing statements and attached engineering report, which was prepared by me, is true and correct to the best of my knowledge and belief.



KEVIN T. FISHER

December 30, 2010

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of KQSA, LLC, permittee of digital television station KQSA-DT in Topeka, Kansas, in support of its Application for Construction Permit to operate on Channel 22 from a new site. This application is being filed with the parameters specified in the station's Petition for Rulemaking to change operation from Channel 12 to Channel 22.

It is proposed to utilize a standard Dielectric directional antenna, which is mounted at the 251-meter level of an existing 286-meter tower. Exhibit B provides elevation and azimuth pattern data for the proposed antenna. Exhibit C is a map upon which the predicted service contours are plotted. As shown, the city of license is completely contained within the proposed 43 dBu service contour. Proposed operating parameters are provided in Exhibit D. An interference study is included in Exhibit E, and it is important to note that the study utilized a cell size of 2.0 kilometers and an increment spacing of 1.0 kilometer. A power density calculation is provided in Exhibit F.

It is not expected that the proposed facility would cause objectionable interference to any other broadcast or non-broadcast station authorized to operate at or near the new KQSA-DT site. However, if such should occur, the owner of this station recognizes its obligation to take whatever corrective actions are necessary.

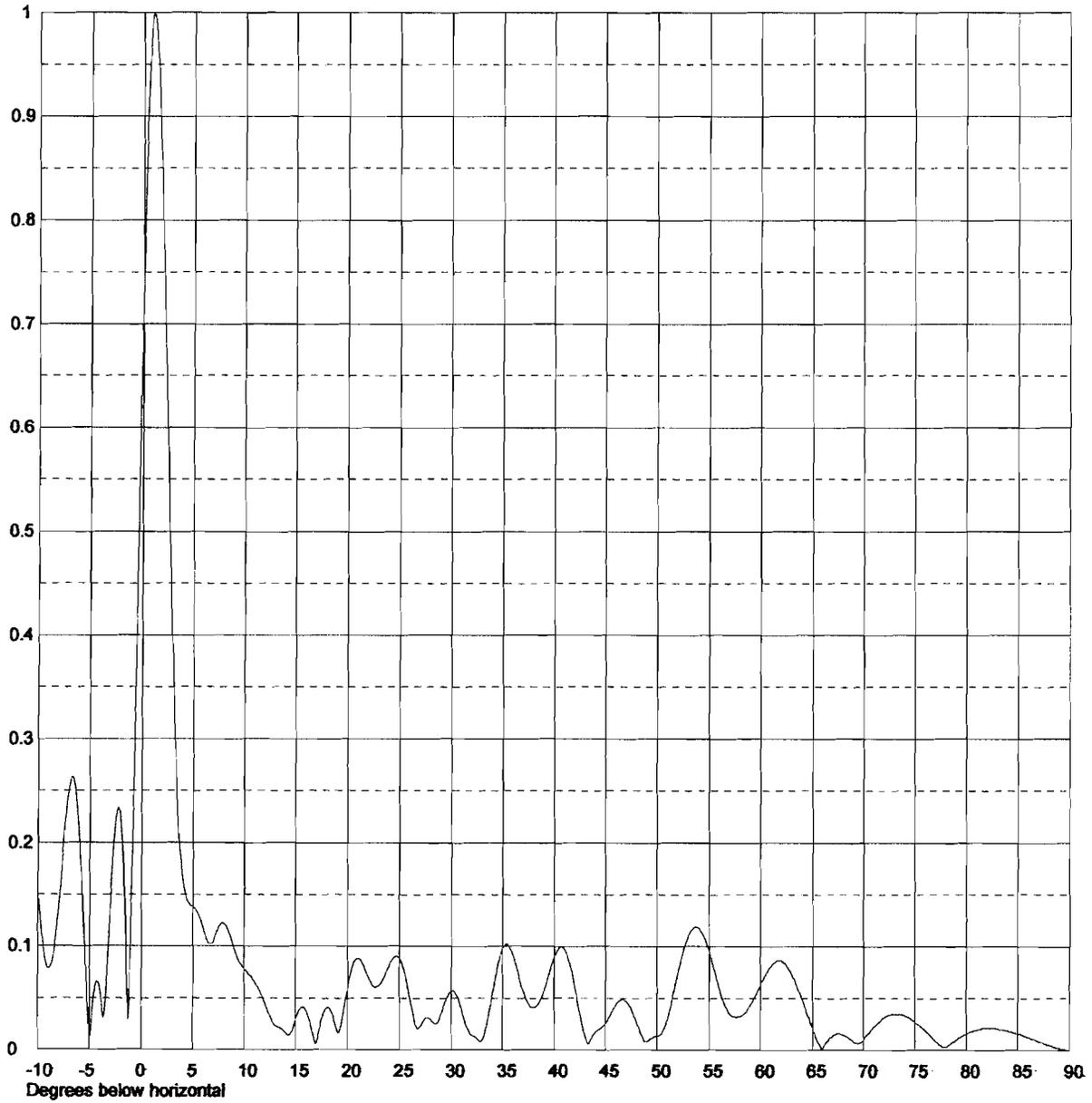
Since no change in overall height or location of the existing tower is proposed herein, the FAA has not been notified of this application. The FCC issued Antenna Structure Registration Number 1032651 to this tower.



EXHIBIT B-1
ANTENNA ELEVATION PATTERN
PROPOSED KSQA-DT
CHANNEL 22 - TOPEKA, KANSAS
SMITH AND FISHER

ELEVATION PATTERN

RMS Gain at Main Lobe	22.0 (13.42 dB)	Beam Tilt	1.00 Degrees
RMS Gain at Horizontal	11.6 (10.64 dB)	Frequency	527.00 MHz
Calculated / Measured	Calculated	Drawing #	26Q220100-90



Remarks:



EXHIBIT B-2
ANTENNA AZIMUTH PATTERN
PROPOSED KSQA-DT
CHANNEL 22 - TOPEKA, KANSAS
SMITH AND FISHER

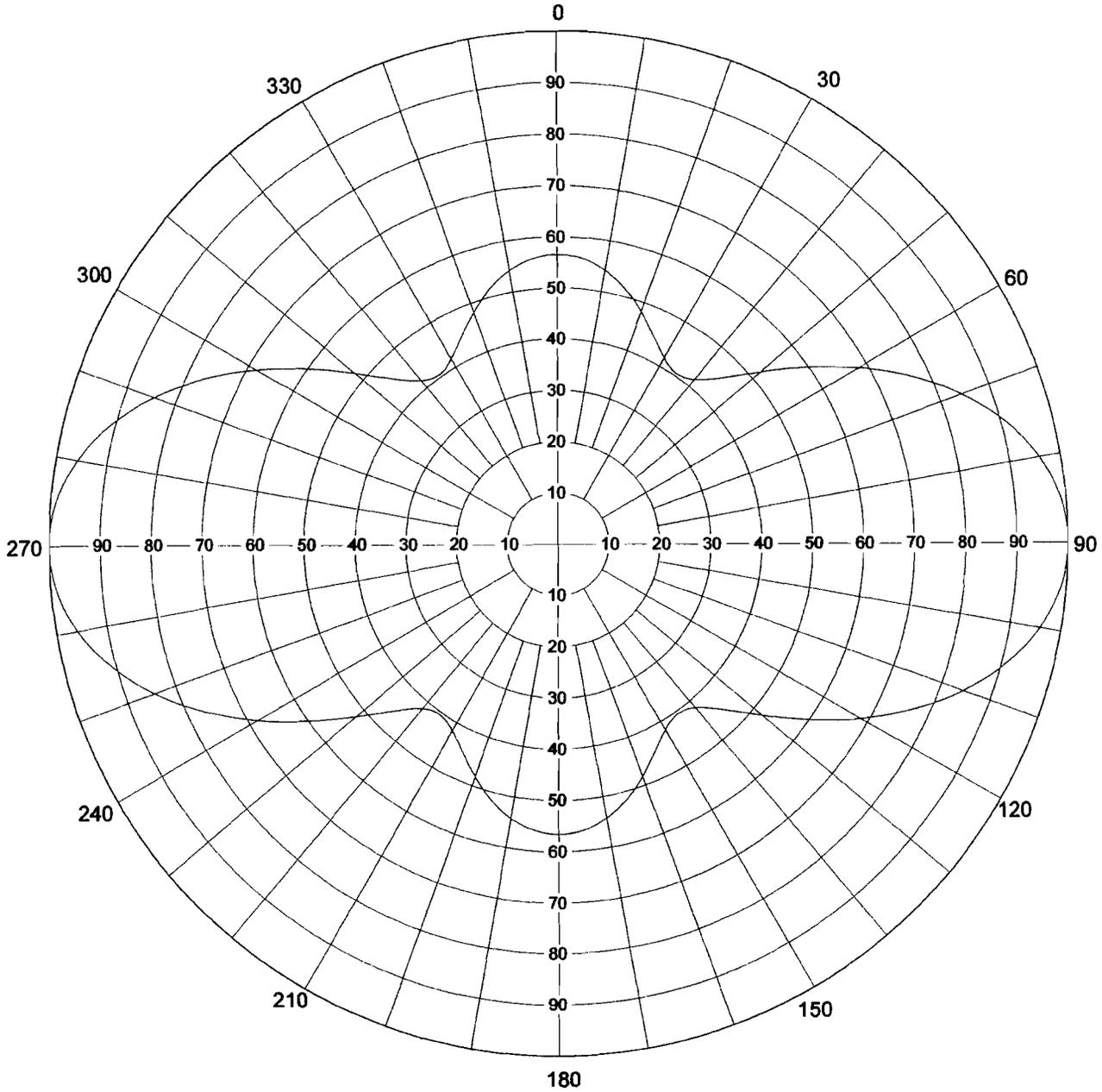
AZIMUTH PATTERN

Gain
Calculated / Measured

2.30 (3.62 dB)
Calculated

Frequency
Drawing #

527 MHz
TFU-P230



Remarks:



EXHIBIT B-3
ANTENNA RELATIVE FIELD VALUES
PROPOSED KSQA-DT
CHANNEL 22 – TOPEKA, KANSAS
 SMITH AND FISHER

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # **TFU-P230**

Angle	Field														
0	0.566	45	0.457	90	1.000	135	0.457	180	0.566	225	0.457	270	1.000	315	0.457
1	0.565	46	0.468	91	1.000	136	0.447	181	0.565	226	0.468	271	1.000	316	0.447
2	0.565	47	0.480	92	0.998	137	0.438	182	0.565	227	0.480	272	0.998	317	0.438
3	0.563	48	0.493	93	0.996	138	0.430	183	0.563	228	0.493	273	0.996	318	0.430
4	0.562	49	0.506	94	0.993	139	0.423	184	0.562	229	0.506	274	0.993	319	0.423
5	0.560	50	0.520	95	0.990	140	0.417	185	0.560	230	0.520	275	0.990	320	0.417
6	0.557	51	0.535	96	0.985	141	0.413	186	0.557	231	0.535	276	0.985	321	0.413
7	0.554	52	0.550	97	0.980	142	0.409	187	0.554	232	0.550	277	0.980	322	0.409
8	0.551	53	0.566	98	0.973	143	0.407	188	0.551	233	0.566	278	0.973	323	0.407
9	0.547	54	0.582	99	0.967	144	0.406	189	0.547	234	0.582	279	0.967	324	0.406
10	0.542	55	0.599	100	0.959	145	0.405	190	0.542	235	0.599	280	0.959	325	0.405
11	0.538	56	0.615	101	0.950	146	0.406	191	0.538	236	0.615	281	0.950	326	0.406
12	0.533	57	0.632	102	0.941	147	0.408	192	0.533	237	0.632	282	0.941	327	0.408
13	0.527	58	0.649	103	0.931	148	0.411	193	0.527	238	0.649	283	0.931	328	0.411
14	0.522	59	0.666	104	0.921	149	0.414	194	0.522	239	0.666	284	0.921	329	0.414
15	0.516	60	0.683	105	0.909	150	0.418	195	0.516	240	0.683	285	0.909	330	0.418
16	0.509	61	0.700	106	0.898	151	0.423	196	0.509	241	0.700	286	0.898	331	0.423
17	0.503	62	0.717	107	0.885	152	0.428	197	0.503	242	0.717	287	0.885	332	0.428
18	0.496	63	0.734	108	0.872	153	0.434	198	0.496	243	0.734	288	0.872	333	0.434
19	0.489	64	0.751	109	0.858	154	0.440	199	0.489	244	0.751	289	0.858	334	0.440
20	0.482	65	0.767	110	0.844	155	0.447	200	0.482	245	0.767	290	0.844	335	0.447
21	0.475	66	0.783	111	0.830	156	0.454	201	0.475	246	0.783	291	0.830	336	0.454
22	0.468	67	0.799	112	0.815	157	0.461	202	0.468	247	0.799	292	0.815	337	0.461
23	0.461	68	0.815	113	0.799	158	0.468	203	0.461	248	0.815	293	0.799	338	0.468
24	0.454	69	0.830	114	0.783	159	0.475	204	0.454	249	0.830	294	0.783	339	0.475
25	0.447	70	0.844	115	0.767	160	0.482	205	0.447	250	0.844	295	0.767	340	0.482
26	0.440	71	0.858	116	0.751	161	0.489	206	0.440	251	0.858	296	0.751	341	0.489
27	0.434	72	0.872	117	0.734	162	0.496	207	0.434	252	0.872	297	0.734	342	0.496
28	0.428	73	0.885	118	0.717	163	0.503	208	0.428	253	0.885	298	0.717	343	0.503
29	0.423	74	0.898	119	0.700	164	0.509	209	0.423	254	0.898	299	0.700	344	0.509
30	0.418	75	0.909	120	0.683	165	0.516	210	0.418	255	0.909	300	0.683	345	0.516
31	0.414	76	0.921	121	0.666	166	0.522	211	0.414	256	0.921	301	0.666	346	0.522
32	0.411	77	0.931	122	0.649	167	0.527	212	0.411	257	0.931	302	0.649	347	0.527
33	0.408	78	0.941	123	0.632	168	0.533	213	0.408	258	0.941	303	0.632	348	0.533
34	0.406	79	0.950	124	0.615	169	0.538	214	0.406	259	0.950	304	0.615	349	0.538
35	0.405	80	0.959	125	0.599	170	0.542	215	0.405	260	0.959	305	0.599	350	0.542
36	0.406	81	0.967	126	0.582	171	0.547	216	0.406	261	0.967	306	0.582	351	0.547
37	0.407	82	0.973	127	0.566	172	0.551	217	0.407	262	0.973	307	0.566	352	0.551
38	0.409	83	0.980	128	0.550	173	0.554	218	0.409	263	0.980	308	0.550	353	0.554
39	0.413	84	0.985	129	0.535	174	0.557	219	0.413	264	0.985	309	0.535	354	0.557
40	0.417	85	0.990	130	0.520	175	0.560	220	0.417	265	0.990	310	0.520	355	0.560
41	0.423	86	0.993	131	0.506	176	0.562	221	0.423	266	0.993	311	0.506	356	0.562
42	0.430	87	0.996	132	0.493	177	0.563	222	0.430	267	0.996	312	0.493	357	0.563
43	0.438	88	0.998	133	0.480	178	0.565	223	0.438	268	0.998	313	0.480	358	0.565
44	0.447	89	1.000	134	0.468	179	0.565	224	0.447	269	1.000	314	0.468	359	0.565

Remarks:



CONTOUR POPULATION
 48 DBU : 357,417
 41 DBU : 468,232

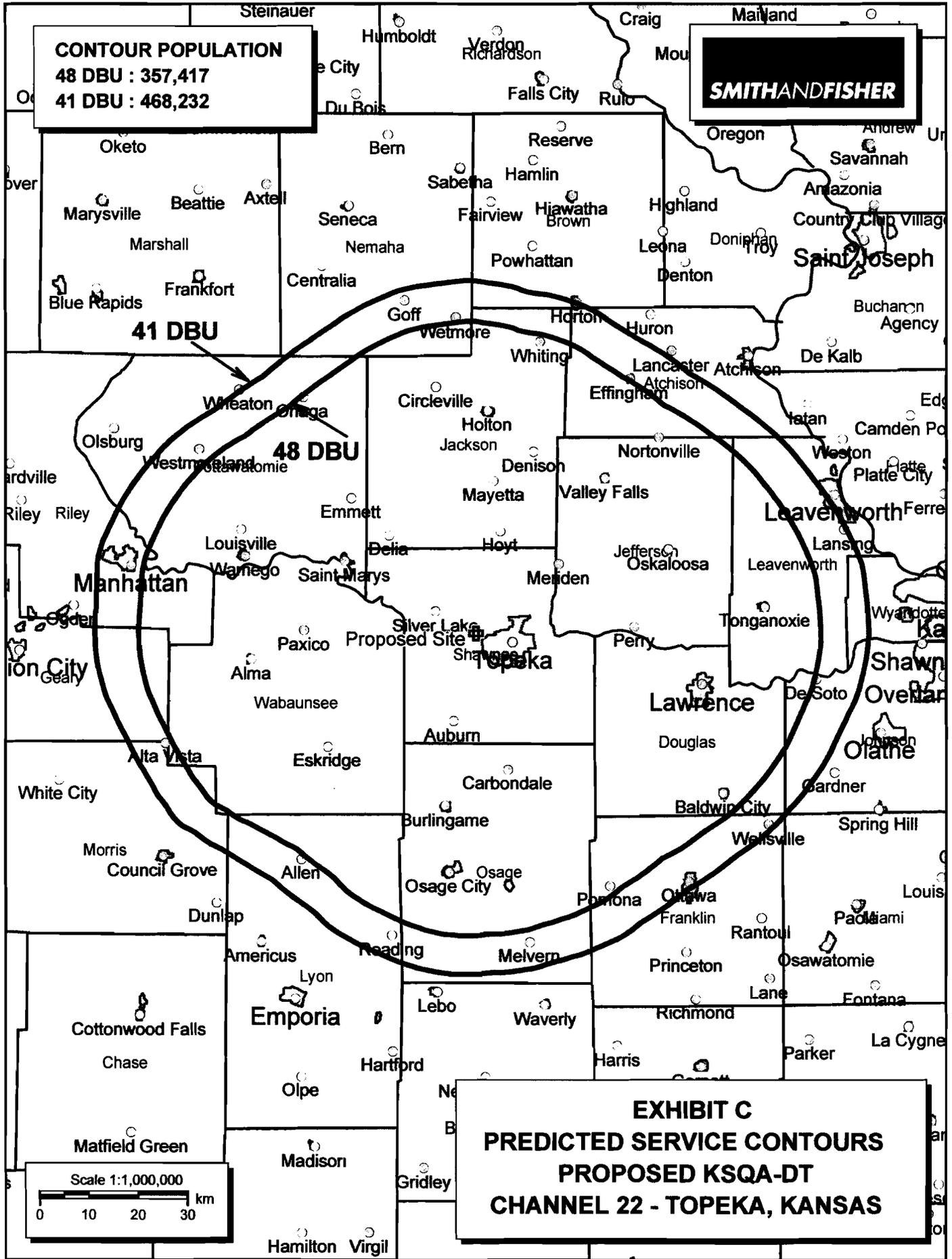


EXHIBIT C
PREDICTED SERVICE CONTOURS
PROPOSED KSQA-DT
CHANNEL 22 - TOPEKA, KANSAS

PROPOSED OPERATING PARAMETERS

PROPOSED KSQA-DT
CHANNEL 22 – TOPEKA, KANSAS

Transmitter Power Output:	3.5 kW
Transmission Line Efficiency:	79.9%
Antenna Power Gain – Main Lobe:	50.6
Effective Radiated Power – Main Lobe:	100 kW
Transmitter Make and Model:	Type-accepted
Transmission Line Make and Model:	Dielectric EIA
Size and Type:	6-1/8" rigid
Length:	880 feet
Antenna:	
Make and Model:	Dielectric TFU-26DSC-R P230
Orientation:	90 and 270 degrees true
Beam Tilt:	1.0 degrees
Radiation Center Above Ground:	251 meters
Radiation Center Above Mean Sea Level:	580 meters
Radiation Center Above Average Terrain:	281 meters
Tower:	
Coordinates (NAD27):	39-03-50 N 95-45-49 W
FCC ASRN:	1032651
Site Elevation:	329 meters
Overall Height:	285.7

INTERFERENCE STUDY
PROPOSED KSQA-DT
CHANNEL 22 – TOPEKA, KANSAS

The instant proposal specifies an ERP of 100 kW (directional) at 281 meters above average terrain, which we have determined to be allowable under the FCC's interference standard with respect to various DTV facilities, except one.

We looked at the interference situation with respect to facilities as they will exist on or before February 17, 2009, the date by which all stations will be operating with the digital facilities recently adopted in the Commission's DTV Table of Allotments.

In evaluating the interference effect of this proposal, we have relied upon the V-Soft Communications "SunDTV" computer program, which mimics the FCC's program. In conducting our studies, we employed a cell size of 2.0 kilometers and an increment spacing of 1.0 kilometer along each radial. In addition, we utilized the 2000 U.S. Census. The study's summary, which appears in Exhibit E-2, concludes that the proposed KSQA-DT facility would not cause significant (more than 0.5%) interference to the service population of any full-power digital television facility.

In addition, the same Longley-Rice interference study also reveals that the proposed KSQA-DT facility does not cause interference within the protected 74 dBu contour of any potentially affected Class A low power television station.

Therefore, this proposal meets the FCC's *de minimis* interference standards for digital television station operations.

LONGLEY-RICE INTERFERENCE STUDY RESULTS

PROPOSED KSQA-DT
CHANNEL 22 – TOPEKA, KANSAS

Summary Study

Percent allowed new interference: 0.500
Percent allowed new interference to non Class A LPTV: 2.000
Census data selected 2000
Data Base Selected
./data_files/pt_tvdb.sff
TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 12-29-2010 Time: 05:58:19

Record Selected for Analysis

KSQA-DT USERRECORD-01 TOPEKA KS US
Channel 22 ERP 100. kW HAAT 278. m RCAMSL 00580 m
Latitude 039-03-50 Longitude 0095-45-49
Status APP Zone 2 Border Site number: 01
Dir Antenna Make usr Model USRPAT01 Beam tilt N Ref Azimuth 0.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility (site # 01) meets maximum height/power limits

Site number	1			
Azimuth	ERP	HAAT	41.0 dBu F(50,90)	
(Deg)	(kW)	(m)	(km)	
0.0	32.036	285.8	70.9	
45.0	21.949	292.1	69.3	
90.0	100.000	312.5	79.6	
135.0	21.949	276.5	68.2	
180.0	32.036	253.1	68.6	
225.0	21.949	237.4	65.6	
270.0	100.000	289.5	77.4	
315.0	21.949	280.1	68.5	

Evaluation toward Class A Stations from site # 01

No Spacing violations or contour overlap
to Class A stations from site # 01

Class A Evaluation Complete

SPACING VIOLATION FOUND BETWEEN STATION

KSQA-DT 22 TOPEKA

KS USERRECORD01

Site # 01

and station

SHORT TO: KTAJ-TV 21 ST. JOSEPH MO BLCDT 20060703AAK
039-01-20 0094-30-49
Req. separation => 24.0 <= 110.0 Actual separation 108.3 Short 1.7(
84.3) km

LANDMOBILE SPACING VIOLATIONS FOUND

NONE from Site # 01

Checks to Site Number 01

- Proposed facility OK to FCC Monitoring Stations
- Proposed facility OK toward West Virginia quiet zone
- Proposed facility OK toward Table Mountain
- Proposed facility is beyond the Canadian coordination distance
- Proposed facility is beyond the Mexican coordination distance
- Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

	Proposed Station		
Channel	Call	City/State	ARN
22	KSQA-DT	TOPEKA KS	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan No.	Call	City/State	Dist(km)	Status	Application Ref.
21	KTAJ-TV	ST. JOSEPH MO	108.0	LIC	BLCDT
					20060703AAK
22	KSNC	GREAT BEND KS	270.0	LIC	BLCDT
					20081112AIQ
22	WOWT-TV	OMAHA NE	250.8	CP	BPCDT
					20080611AAC
22	WOWT-TV	OMAHA NE	250.8	LIC	BLCDT
					20050706AAA
22	KOKI-TV	TULSA OK	337.7	LIC	BLCDT
					20021127AGL

Study of this proposal found the following interference problem(s):
NONE.

POWER DENSITY CALCULATION

PROPOSED KSQA-DT
CHANNEL 22 – TOPEKA, KANSAS

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Topeka facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 100 kW, an antenna radiation center 251 meters above ground, and the vertical pattern of the Dielectric antenna, maximum power density two meters above ground of 0.00049 mw/cm^2 is calculated to occur 181 meters east and west of the base of the tower. Since this is only 0.1 percent of the 0.35 mw/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 22 (518-524 MHz), this proposal may be excluded from consideration with respect to public exposure to nonionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive nonionizing radiation.