



ENGINEERING STATEMENT
OF
JOHN F.X. BROWNE, P.E.
IN SUPPORT OF
APPLICATION FOR CONSTRUCTION PERMIT
POST-TRANSITION DTV FACILITY
KNXV-DT
PHOENIX, AZ

Background

Scripps Howard Broadcasting Company (SHB) is the licensee of KNXV, located at Phoenix, AZ, which is presently operating its digital facility on out-of-core Channel 56 with the following parameters:

Pre-transition Facility (Ch. 56)

Coordinates: 33° 20' 00" N (NAD27)
112° 03' 46" W
ERP: 500 kW (omni)
HAAT: 505m

KNXV elected Channel 15 (its analog channel) and has been allotted the post-transition DTV operation Appendix B facility parameters listed below:

Post-transition Facility (Ch. 15)

Coordinates: 33° 20' 00" N (NAD27)
112° 03' 46" W
ERP: 218 kW (omni)
HAAT: 509m



KNXV presently operates is analog facility on Channel 15 and the antenna it had been using was not compatible for DTV; therefore, in December 2007, KNXV installed a new Channel 15 antenna (in place of its old Channel 15 antenna) which can be used for DTV operations (post-transition) and will be used by its analog facility in the interim (until February 17, 2009).

Site

The facility is located within the Mexican border zone; however, KNXV is not seeking to expand the coverage contour of its digital facility beyond the contour of its Appendix B facility and coordination with the Mexican government is requested to the extent necessary in light of the FCC's ongoing negotiations with the Mexican government regarding the allotments specified in Appendix B of the Seventh Report and Order.

Antenna System and Tower

The existing KNXV antenna is installed on a multi-user tower (ASR#1065157) and the new analog antenna, a Dielectric TFU-20GTH/VP O4 (which will be usable for DTV), was installed in December 2007 as mentioned above. The tower has an overall height of 887.6m AMSL (with appurtenances) and the antenna will have a center of radiation of 879m AMSL (with a calculated HAAT of 521m) which is 13 m higher than the radiation center AMSL of the Appendix B facility; therefore, the ERP will be reduced from 218 kW (as specified in Appendix B) to 193 kW so that the contour of the proposed post-transition facility does not exceed the contour of its Appendix B facility in any direction. The proposed KNXV facility will incorporate both horizontal (193 kW) and vertical polarization (78 kW). (See attached VP pattern at Figure 1c.) The vertically polarized radiation component will not exceed the authorized horizontally polarized component in any azimuth.

Coverage

The entire principal community of Phoenix, AZ is well within the predicted F(50,90)



48 dBu contour using the proposed omni-directional 193 kW ERP.

Interference

KNXV is not seeking to expand its service contour beyond the contour of its Appendix B facility in any direction; therefore, no interference analysis is required for this application. Table 1, attached hereto, compares the distances to the noise limited contour for the KNXV Appendix B facility vs. the proposed facility.

Environmental/RFR

The proposed construction does not require preparation of an Environmental Assessment as it does not involve any of the factors listed in Section 1.1306.

The additional ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.0015967 mW/cm² which is less than 5% of the MPE for public exposure (0.32 mW/cm²) at the proposed frequency and, therefore, the proposal is excluded from further consideration.

SHB recognizes that this is a multi-user tower site and RFR levels on the tower may exceed the occupational exposure limit. SHB agrees to comply with the Commission's requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers are encouraged to wear personal RFR monitors when on the structure. The tower base is enclosed by a locked security fence and appropriate signage warning of RFR hazards are posted.

**Certification**

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

A handwritten signature in black ink, reading 'John F.X. Browne', written over a horizontal line.

John F.X. Browne, P.E.
February 22, 2008

Table 1
KNXV-DT
Appendix B Facility vs. Proposed Facility Contour Distance Table

<u>Degrees</u>	<u>Appendix B Facility Distance (miles)</u>	<u>Proposed Facility Distance (miles)</u>	<u>Difference (miles)</u>
0	65.93	65.87	-0.06
10	65.93	65.87	-0.06
20	66.18	66.12	-0.06
30	65.56	65.50	-0.06
40	64.81	64.81	0.00
50	63.44	63.38	-0.06
60	61.21	61.15	-0.06
70	61.39	61.33	-0.06
80	63.13	63.07	-0.06
90	63.88	63.88	0.00
100	64.25	64.25	0.00
110	64.25	64.19	-0.06
120	64.50	64.44	-0.06
130	64.81	64.81	0.00
140	65.00	64.94	-0.06
150	65.37	65.31	-0.06
160	65.43	65.37	-0.06
170	65.31	65.31	0.00
180	65.62	65.56	-0.06
190	65.62	65.56	-0.06
200	65.50	65.43	-0.06
210	65.37	65.31	-0.06
220	65.31	65.31	0.00
230	64.94	64.94	0.00
240	63.26	63.26	0.00
250	63.26	63.20	-0.06
260	63.57	63.57	0.00
270	63.26	63.20	-0.06
280	64.69	64.63	-0.06
290	66.30	66.24	-0.06
300	66.92	66.74	-0.19
310	66.99	66.86	-0.12
320	66.86	66.68	-0.19
330	66.49	66.37	-0.12
340	66.12	65.99	-0.12
350	65.99	65.93	-0.06

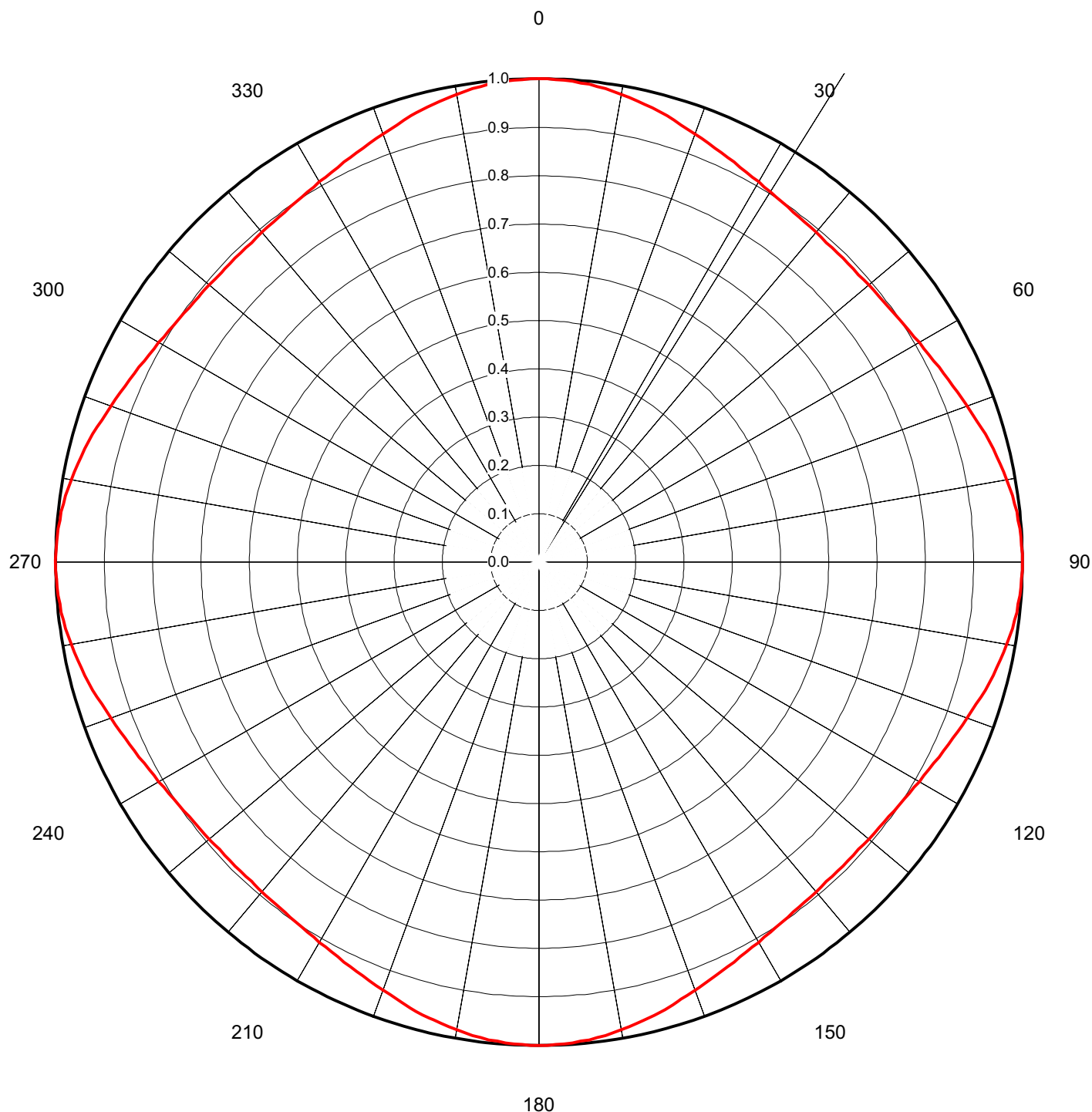


Proposal Number	C-01469	Revision:	1
Date	30-May-07		
Call Letters	KNXV	Channel	15
Location	Phoenix, AZ		
Customer			
Antenna Type	TFU-20GTH/VP O4		

AZIMUTH PATTERN

Gain **1.10** **(0.41 dB)**
Calculated / Measured **Calculated**

Frequency **479.00 MHz**
Drawing # **TFU-O4-HPOL**



This document contains proprietary and confidential information of Dielectric Communications and SPX Corporation. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric Communications or SPX Corporation.

Figure 1a



Proposal Number **C-01469** Revision: **1**
Date **30-May-07**
Call Letters **KNXV** Channel **15**
Location **Phoenix, AZ**
Customer
Antenna Type **TFU-20GTH/VP 04**

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TFU-04-HPOL**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	1.000	45	0.889	90	1.000	135	0.889	180	1.000	225	0.889	270	1.000	315	0.889
1	1.000	46	0.889	91	1.000	136	0.889	181	1.000	226	0.889	271	1.000	316	0.889
2	0.999	47	0.889	92	0.999	137	0.889	182	0.999	227	0.889	272	0.999	317	0.889
3	0.998	48	0.889	93	0.998	138	0.889	183	0.998	228	0.889	273	0.998	318	0.889
4	0.997	49	0.890	94	0.997	139	0.890	184	0.997	229	0.890	274	0.997	319	0.890
5	0.995	50	0.891	95	0.995	140	0.891	185	0.995	230	0.891	275	0.995	320	0.891
6	0.993	51	0.892	96	0.993	141	0.892	186	0.993	231	0.892	276	0.993	321	0.892
7	0.991	52	0.893	97	0.991	142	0.893	187	0.991	232	0.893	277	0.991	322	0.893
8	0.989	53	0.894	98	0.989	143	0.894	188	0.989	233	0.894	278	0.989	323	0.894
9	0.986	54	0.895	99	0.986	144	0.895	189	0.986	234	0.895	279	0.986	324	0.895
10	0.983	55	0.897	100	0.983	145	0.897	190	0.983	235	0.897	280	0.983	325	0.897
11	0.979	56	0.899	101	0.979	146	0.899	191	0.979	236	0.899	281	0.979	326	0.899
12	0.976	57	0.901	102	0.976	147	0.901	192	0.976	237	0.901	282	0.976	327	0.901
13	0.972	58	0.903	103	0.972	148	0.903	193	0.972	238	0.903	283	0.972	328	0.903
14	0.968	59	0.905	104	0.968	149	0.905	194	0.968	239	0.905	284	0.968	329	0.905
15	0.964	60	0.908	105	0.964	150	0.908	195	0.964	240	0.908	285	0.964	330	0.908
16	0.960	61	0.911	106	0.960	151	0.911	196	0.960	241	0.911	286	0.960	331	0.911
17	0.956	62	0.914	107	0.956	152	0.914	197	0.956	242	0.914	287	0.956	332	0.914
18	0.951	63	0.917	108	0.951	153	0.917	198	0.951	243	0.917	288	0.951	333	0.917
19	0.947	64	0.920	109	0.947	154	0.920	199	0.947	244	0.920	289	0.947	334	0.920
20	0.943	65	0.924	110	0.943	155	0.924	200	0.943	245	0.924	290	0.943	335	0.924
21	0.939	66	0.927	111	0.939	156	0.927	201	0.939	246	0.927	291	0.939	336	0.927
22	0.935	67	0.931	112	0.935	157	0.931	202	0.935	247	0.931	292	0.935	337	0.931
23	0.931	68	0.935	113	0.931	158	0.935	203	0.931	248	0.935	293	0.931	338	0.935
24	0.927	69	0.939	114	0.927	159	0.939	204	0.927	249	0.939	294	0.927	339	0.939
25	0.924	70	0.943	115	0.924	160	0.943	205	0.924	250	0.943	295	0.924	340	0.943
26	0.920	71	0.947	116	0.920	161	0.947	206	0.920	251	0.947	296	0.920	341	0.947
27	0.917	72	0.951	117	0.917	162	0.951	207	0.917	252	0.951	297	0.917	342	0.951
28	0.914	73	0.956	118	0.914	163	0.956	208	0.914	253	0.956	298	0.914	343	0.956
29	0.911	74	0.960	119	0.911	164	0.960	209	0.911	254	0.960	299	0.911	344	0.960
30	0.908	75	0.964	120	0.908	165	0.964	210	0.908	255	0.964	300	0.908	345	0.964
31	0.905	76	0.968	121	0.905	166	0.968	211	0.905	256	0.968	301	0.905	346	0.968
32	0.903	77	0.972	122	0.903	167	0.972	212	0.903	257	0.972	302	0.903	347	0.972
33	0.901	78	0.976	123	0.901	168	0.976	213	0.901	258	0.976	303	0.901	348	0.976
34	0.899	79	0.979	124	0.899	169	0.979	214	0.899	259	0.979	304	0.899	349	0.979
35	0.897	80	0.983	125	0.897	170	0.983	215	0.897	260	0.983	305	0.897	350	0.983
36	0.895	81	0.986	126	0.895	171	0.986	216	0.895	261	0.986	306	0.895	351	0.986
37	0.894	82	0.989	127	0.894	172	0.989	217	0.894	262	0.989	307	0.894	352	0.989
38	0.893	83	0.991	128	0.893	173	0.991	218	0.893	263	0.991	308	0.893	353	0.991
39	0.892	84	0.993	129	0.892	174	0.993	219	0.892	264	0.993	309	0.892	354	0.993
40	0.891	85	0.995	130	0.891	175	0.995	220	0.891	265	0.995	310	0.891	355	0.995
41	0.890	86	0.997	131	0.890	176	0.997	221	0.890	266	0.997	311	0.890	356	0.997
42	0.889	87	0.998	132	0.889	177	0.998	222	0.889	267	0.998	312	0.889	357	0.998
43	0.889	88	0.999	133	0.889	178	0.999	223	0.889	268	0.999	313	0.889	358	0.999
44	0.889	89	1.000	134	0.889	179	1.000	224	0.889	269	1.000	314	0.889	359	1.000

This document contains proprietary and confidential information of Dielectric Communications and SPX Corporation. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric Communications or SPX Corporation.

Proposal Number	C-01469	Revision:	1
Date	30-May-07		
Call Letters	KNXV	Channel	15
Location	Phoenix, AZ		
Customer			
Antenna Type	TFU-20GTH/VP 04		

AZIMUTH PATTERN/VERTICAL POLARIZATION

Gain	1.30	(1.14 dB)
Calculated / Measured		Calculated

Frequency	479.00 MHz
Drawing #	TFU-O4-VPOL

