

## KESSLER AND GEHMAN ASSOCIATES, INC.

W51EG Parkersburg, WV

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ENGINEERING STATEMENT OF RYAN WILLOUR OF THE FIRM OF  
KESSLER AND GEHMAN ASSOCIATES, INC., CONSULTING ENGINEERS IN  
CONNECTION WITH A LICENSE TO COVER APPLICATION FOR A DIGITAL  
TELEVISION TRANSLATOR BROADCAST STATION  
W51EG (FCC FILE NO.: BDCCDTT-20061025AEC)  
WEST VIRGINIA EDUCATIONAL BROADCASTING AUTHORITY  
PARKERSBURG, WEST VIRGINIA

### NARRATIVE STATEMENT

This firm has been employed by West Virginia Educational Broadcasting Authority (“WVEBA”) to prepare the engineering portion of FCC Form 347 for a license to cover the above reference digital TV translator broadcast station. The underlying construction permit specifies a Dielectric TLP-8M broadcast antenna with the following azimuth relative field pattern:

Azimuth	Ratio	Azimuth	Ratio	Azimuth	Ratio	Azimuth	Ratio
5	0.944	15	0.918	25	0.901	35	0.895
45	0.908	55	0.921	65	0.942	75	0.974
85	0.995	87	0.996	95	0.985	105	0.94
115	0.865	125	0.775	135	0.684	145	0.593
155	0.497	165	0.392	175	0.28	185	0.197
191	0.179	195	0.184	205	0.226	215	0.257
225	0.227	235	0.183	239	0.178	245	0.194
255	0.278	265	0.393	275	0.502	285	0.599
295	0.688	305	0.778	315	0.873	325	0.951
335	0.993	342	1	345	0.998	355	0.976

A contract to construct W51EG was put out to bid and was awarded to Radio Frequency Systems (“RFS”), thus the permitted Dielectric TLP-8M antenna was replaced by an RFS RD08A-662806L0S00(MOD) antenna. Exhibit E1 tabulates the manufacturer’s azimuth pattern for the substitute antenna and shows an identical match to the permitted pattern.

**KESSLER AND GEHMAN ASSOCIATES, INC.**

Since the herein proposed substitute antenna shares identical electrical properties as the permitted antenna it is an acceptable substitution to use for the instant license to cover application.

**DECLARATION OF ENGINEER**

I, Ryan Wilhour, declare and state that I am a graduate electrical engineer with a Bachelor of Science in Electrical Engineering and my qualifications are a matter of record with the Federal Communication Commission, and that I am an engineer in the firm of Kessler and Gehman Associates, Inc., and that firm has been retained by West Virginia Educational Broadcasting Authority to prepare the herein application.

The foregoing statement and the report regarding the aforementioned engineering work are true and correct to the best of my knowledge. Executed on October 31, 2008.

KESSLER AND GEHMAN ASSOCIATES, INC.



Ryan Wilhour  
Consulting Engineer

W51EG

PARKERSBURG, WEST VIRGINIA

TABULATION OF RELATIVE FIELD FOR PROPOSED DIRECTIONAL ANTENNA

<u>AZIMUTH</u>	<u>RELATIVE FIELD</u>	<u>AZIMUTH</u>	<u>RELATIVE FIELD</u>
N000°E	0.960	N180°E	0.232
N005°E	0.944	N185°E	0.197
N010°E	0.930	N190°E	0.180
N015°E	0.918	N195°E	0.184
N020°E	0.908	N200°E	0.202
N025°E	0.901	N205°E	0.226
N030°E	0.897	N210°E	0.247
N035°E	0.895	N215°E	0.257
N040°E	0.902	N220°E	0.248
N045°E	0.908	N225°E	0.227
N050°E	0.914	N230°E	0.202
N055°E	0.921	N235°E	0.183
N060°E	0.930	N240°E	0.178
N065°E	0.942	N245°E	0.194
N070°E	0.958	N250°E	0.230
N075°E	0.974	N255°E	0.278
N080°E	0.988	N260°E	0.334
N085°E	0.995	N265°E	0.393
N090°E	0.995	N270°E	0.449
N095°E	0.985	N275°E	0.502
N100°E	0.967	N280°E	0.552
N105°E	0.940	N285°E	0.599
N110°E	0.906	N290°E	0.644
N115°E	0.865	N295°E	0.688
N120°E	0.821	N300°E	0.733
N125°E	0.775	N305°E	0.778
N130°E	0.730	N310°E	0.826
N135°E	0.684	N315°E	0.873
N140°E	0.639	N320°E	0.916
N145°E	0.593	N325°E	0.951
N150°E	0.546	N330°E	0.977
N155°E	0.497	N335°E	0.993
N160°E	0.446	N340°E	1.000
N165°E	0.392	N345°E	0.998
N170°E	0.335	N350°E	0.990
N175°E	0.280	N355°E	0.976

ADDITIONAL AZIMUTHS: (N087°E, 0.996), (N191°E, 0.179), (N239°E, 0.178)

ADDITIONAL AZIMUTHS: (N342°E, 1.000)

Replacement Antenna: RFS Series RD slot Model No.: RD08A-662806L1S00(MOD)

**KESSLER & GEHMAN**  
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**W51EG**  
 PARKERSBURG, WEST VIRGINIA

20081031

EXHIBIT E1