

ENGINEERING REPORT

**PARTIAL PROOF
OF PERFORMANCE**

on

WSBT(AM) – South Bend, IN
Facility ID No. 73985

In response to
W241AD – South Bend, IN
Translator Construction Permit
File No. BPFT-20120104ACL

March, 2012

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Broadcast Engineering Consultants
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Table of Contents

1. Table of Contents
2. Certification of Engineer
2. Discussion of Report
3. Exhibit 1.0 - Daytime Field Strength Measurements – 45.0°T, 108.0°T, 275.0°T & 330.0° True
4. Exhibit 2.0 - Nighttime Field Strength Measurements – 67.5°T, 88.0°T & 130.0° True
5. Exhibit 2.1 - Nighttime Field Strength Measurements – 183.0°T, 265.0°T & 304.5° True
6. Exhibit 3.0 -Tabulation of Daytime & Nighttime Ratios

Certification of Engineers

The firm of Munn-Reese, Inc., Broadcast Engineering Consultants, with offices at 385 Airport Drive, Coldwater, Michigan, has been retained for the purpose of preparing the technical data forming this report.

The data utilized in this report is based on field measurements made by the undersigned, or others under the supervision of the undersigned, on the dates and times indicated in the report.

The report has been prepared by properly trained electronics specialists under the direction of the undersigned whose qualifications are a matter of record before the Federal Communications Commission.

I declare under penalty of perjury that the contents of this report are true and accurate to the best of my knowledge and belief.

March 28, 2012

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Discussion

The firm of Munn-Reese, Inc., was retained to prepare this report detailing a Partial Proof of Performance on AM Radio Station WSBT(AM) – South Bend, IN (Facility ID No. 73985), License No. BZ-19931108AB, as required by Special Condition/Restriction (1) on W241AD – South Bend, IN (Facility ID No. 79264) Construction Permit File No. BPFT-20120104ACL. The W241AD Construction Permit authorizes relocation of the FM Translator onto ASR #1030677. The ASR #1030677 tower is a grounded tower located directly on the WSBT(AM) array property. The ASR #1030677 tower is not part of the WSBT(AM), array however, the tower has been detuned for the operating frequency of WSBT(AM).

WSBT(AM) – South Bend, IN currently operates on 960 kHz with 5.0 kW of daytime directional power using a four tower array and 5.0 kW of nighttime directional power using a separate four tower array. W241AD is authorized to operate with 0.210 kW (H&V) of non-directional power at 417 meters AMSL (152 meters AGL). As stated before, the W241AD antenna is mounted on ASR #1030677 which is a grounded tower detuned for the AM frequency of 960 kHz and located directly on the WSBT(AM) array property.

Directional field strength measurements were conducted by Mr. Edmond R. Trombley and Mr. Richard P. Grzebik, engineers in the employ of Munn-Reese, Inc. Mr. Trombley made his measurements using Potomac Instruments Field Intensity Meter, Model #FIM-41, Serial Number 1307. This meter was last calibrated March 21, 2011. Mr. Grzebik made his measurements using Potomac Instruments Field Intensity Meter, Model #FIM-41, Serial Number 1474. This meter was last calibrated September 15, 2008. FIM-41 Field Meter #1474 was compared against the other meter currently in calibration and found to be within the required tolerance.

Measurements were taken on the four (4) daytime monitor point radials and six (6) nighttime monitor point radials meeting the requirements of 47 C.F.R. §73.154(a) of the FCC Rules. Field strength measurements were taken on the dates and at the times indicated in the respective Tabulations of Field Strength Measurements, shown as **Exhibit 1.0** for day operation and **Exhibit(s) 2.0 to 2.1** for night operation. The tabulation sheets show the distance from the transmitter site to each point in units of kilometers. The locations and point numbers were derived from topographical maps in conjunction with GPS assistance. Both before and after measurements were taken with the identical meter regardless of engineer performing the measurements. Before and after measurements were taken approximately one (1) week apart from each other.

Exhibit 3.0 provides a summary of the field intensity measurements made on the daytime and nighttime arrays. As seen in this exhibit, as well as the actual measurements in **Exhibit(s) 1.0 to 2.2**, all ratios are well within the allowable 10% for each individual radial as well as the average of all radials combined. In light of the measurements taken and uniform results obtained, the recent addition of W241AD to ASR #1030677 is believed to have had a negligible effect on the WSBT(AM) daytime or nighttime operations.

Daytime Field Strength Measurements - 45.0°T, 108.0°T, 275.0°T & 330.0° True

Call:	WSBT		Frequency (kHz):			960		Power (kW):	5.0		Engineer: Richard P. Grzebik
				Bearing (°T):			330.0				Meter Model: FIM-41 S/N: 1474
											Calibration Date: Sept. 15, 2008
Point	2012 Before Directional			2012 After Directional			Distance	Direct		Log	
#	mV/m	Time	Date	mV/m	Time	Date	km	Ratio	Remarks	Ratio	Other Notes
1	680	1055	03-19-12	675	1025	03-26-12	1.11	0.9926		-0.0074	
2	670	1059	03-19-12	670	1027	03-26-12	1.24	1.0000		0.0000	
3	321	1112	03-19-12	321	1034	03-26-12	2.31	1.0000		0.0000	
4	222	1118	03-19-12	224	1037	03-26-12	2.91	1.0090		0.0090	
5	164	1127	03-19-12	167	1040	03-26-12	3.54	1.0183		0.0181	
6	137	1132	03-19-12	141	1044	03-26-12	4.00	1.0292		0.0288	
7	129	1136	03-19-12	133	1046	03-26-12	4.22	1.0310		0.0305	
8	129	1141	03-19-12	135	1050	03-26-12	4.80	1.0465		0.0455	
9	84.0	1146	03-19-12	84.0	1053	03-26-12	5.23	1.0000		0.0000	
10	72.0	1157	03-19-12	72.0	1101	03-26-12	7.29	1.0000		0.0000	
						Arithmetic Ratio:		1.0127			
						Log Ratio:		1.0125			

Exhibit 2.0

Nighttime Field Strength Measurements - 67.5°T, 88.0°T and 130.0° True

Call:	WSBT			Frequency (kHz):	960			Power (kW):	5.0			Engineer: Edmund R. Trombley
				Bearing (°T):	67.5							Meter Model: FIM-41 S/N: 1307
												Calibration Date: March 21, 2011
Point	2012 Before Directional			2012 After Directional			Distance	Direct		Log		
#	mV/m	Time	Date	mV/m	Time	Date	km	Ratio	Remarks	Ratio		Other Notes
1	25.0	1438	03-19-12	24.0	1348	03-26-12	1.76	0.9600		-0.0408		
2	11.3	1444	03-19-12	11.0	1401	03-26-12	3.84	0.9735		-0.0269		
3	7.2	1449	03-19-12	7.5	1409	03-26-12	5.84	1.0417		0.0408		
4	6.5	1455	03-19-12	6.0	1416	03-26-12	7.12	0.9231		-0.0800		
5	3.2	1504	03-19-12	3.1	1421	03-26-12	9.31	0.9688		-0.0317		
6	1.0	1514	03-19-12	1.0	1428	03-26-12	11.01	1.0000		0.0000		
7	1.4	1530	03-19-12	1.3	1443	03-26-12	12.67	0.9286		-0.0741		
8	1.5	1539	03-19-12	1.4	1450	03-26-12	14.05	0.9333		-0.0690		
9	1.4	1549	03-19-12	1.3	1455	03-26-12	15.73	0.9286		-0.0741		
10	1.0	1557	03-19-12	1.0	1506	03-26-12	18.88	1.0000		0.0000		
							Arithmetic Ratio:	0.9657				
							Log Ratio:	0.9650				

Call:	WSBT			Frequency (kHz):	960			Power (kW):	5.0			Engineer: Edmund R. Trombley
				Bearing (°T):	88.0							Meter Model: FIM-41 S/N: 1307
												Calibration Date: March 21, 2011
Point	2012 Before Directional			2012 After Directional			Distance	Direct		Log		
#	mV/m	Time	Date	mV/m	Time	Date	km	Ratio	Remarks	Ratio		Other Notes
1	20.1	1626	03-19-12	19.40	1540	03-26-12	3.44	0.9652		-0.0354		
2	6.50	1631	03-19-12	6.10	1546	03-26-12	5.07	0.9385		-0.0635		
3	5.50	1643	03-19-12	5.10	1608	03-26-12	9.89	0.9273		-0.0755		
4	4.70	1650	03-19-12	4.70	1615	03-26-12	11.46	1.0000		0.0000		
5	3.40	1701	03-19-12	3.10	1621	03-26-12	13.07	0.9118		-0.0924		
6	2.00	1709	03-19-12	1.85	1628	03-26-12	14.70	0.9250		-0.0780		
7	1.75	1714	03-19-12	1.75	1636	03-26-12	16.30	1.0000		0.0000		
8	1.50	1722	03-19-12	1.45	1643	03-26-12	17.92	0.9667		-0.0339		
9	1.20	1730	03-19-12	1.15	1650	03-26-12	19.39	0.9583		-0.0426		
10	1.00	1740	03-19-12	1.00	1658	03-26-12	22.64	1.0000		0.0000		
							Arithmetic Ratio:	0.9593				
							Log Ratio:	0.9587				

Call:	WSBT			Frequency (kHz):	960			Power (kW):	5.0			Engineer: Edmund R. Trombley
				Bearing (°T):	130.0							Meter Model: FIM-41 S/N: 1307
												Calibration Date: March 21, 2011
Point	2012 Before Directional			2012 After Directional			Distance	Direct		Log		
#	mV/m	Time	Date	mV/m	Time	Date	km	Ratio	Remarks	Ratio		Other Notes
2	10.0	0942	03-20-12	10.30	1111	03-27-12	4.38	1.0300		0.0296		
3	9.70	0950	03-20-12	9.80	1117	03-27-12	5.15	1.0103		0.0103		
4	8.40	0957	03-20-12	8.50	1122	03-27-12	6.40	1.0119		0.0118		
5	7.20	1010	03-20-12	7.20	1130	03-27-12	8.61	1.0000		0.0000		
6	2.20	1015	03-20-12	2.00	1136	03-27-12	8.85	0.9091		-0.0953		
7	4.90	1023	03-20-12	5.00	1143	03-27-12	10.74	1.0204		0.0202		
8	4.30	1030	03-20-12	4.30	1148	03-27-12	11.33	1.0000		0.0000		
9	4.00	1038	03-20-12	3.80	1154	03-27-12	12.82	0.9500		-0.0513		
10	3.80	1045	03-20-12	3.50	1159	03-27-12	13.81	0.9211		-0.0822		
12	3.10	1103	03-20-12	2.80	1216	03-27-12	15.66	0.9032		-0.1018		
							Arithmetic Ratio:	0.9756				
							Log Ratio:	0.9745				

Nighttime Field Strength Measurements - 183.0°T, 265.0°T and 330.0° True

Exhibit 3.0

Tabulation of Daytime & Nighttime Ratios

Daytime Operation:

Radial	Arithmetic Ratio	Log Ratio
45.0°T	0.9965	0.9959
108.0°T	1.0122	1.0116
275.0°T	1.0351	1.0348
330.0°T	1.0127	1.0125
Average:	1.0141	1.0137

Nighttime Operation:

Radial	Arithmetic Ratio	Log Ratio
67.5°T	0.9657	0.9650
88.0°T	0.9593	0.9587
130.0°T	0.9756	0.9745
183.0°T	0.9773	0.9763
265.0°T	0.9479	0.9440
304.5°T	0.9842	0.9821
Average:	0.9683	0.9668