

SUPPLEMENT TO ENGINEERING REPORT COVERING  
PARTIAL PROOF OF PERFORMANCE  
ON BEHALF OF PENN-JERSEY EDUCATIONAL RADIO CORPORATION  
FOR STATION WNJE(AM) 1040 KILOHERTZ  
FLEMINGTON, NEW JERSEY

JUNE 2009

SUPPLEMENT TO ENGINEERING REPORT COVERING  
PARTIAL PROOF OF PERFORMANCE  
ON BEHALF OF PENN-JERSEY EDUCATIONAL RADIO CORPORATION  
FOR STATION WNJE(AM) 1040 KILOHERTZ  
FLEMINGTON, NEW JERSEY

SUMMARY

This supplemental engineering report is submitted on behalf of Penn-Jersey Educational Radio Corporation, (“Penn-Jersey”) licensee of non-commercial FM station WDVR Delaware Township, New Jersey. The underlying report was submitted to demonstrate compliance with special condition six of construction permit BPED-20070328ACP, which was issued to Penn Jersey for facilities improvements to WDVR. Special condition six requires before and after construction partial proofs of performance be performed on station WNJE Flemington, New Jersey (formerly identified as WCHR) to document that the WDVR construction has not adversely impacted WNJE’s daytime, critical hours and nighttime directional antenna systems. The purpose of this report is to comply with a Commission request to provide summary tabulations of partial proof of performance field strength measurement data for the WNJE daytime, critical hours and nighttime directional antenna system taken under similar environmental conditions. This was accomplished by remeasuring the after construction partial proofs for all three modes of operation when environmental conditions were similar to those that prevailed when the before partial proof

measurements were conducted. WNJE operates on 1040 kilohertz on an unlimited time basis with power of 15 kilowatts daytime, 7.5 kilowatts critical hours and 1.5 kilowatts nighttime.

### METHODOLOGY

The partial proof of performance field strength measurements were conducted in accordance with FCC rules and regulations. The measurements were taken on pertinent pattern radials, including all monitored radials, determined from the most recent WNJE complete proof of performance dated January 2008. All data in this report is referenced to this proof. The before construction measurements were taken between June 2 through July 13, 2008. After completion of construction, the measurements were repeated in an identical manner from May 19 through May 30, 2009.

All proof measurements were conducted during the daytime hours by Charles J. Hecht, who is employed by this firm, and the undersigned, who directed all work. The measurement tabulations are provided in this report as Tables 1-12. The field strength meter employed for this project was a Potomac Instruments FIM-41, serial number 1051, last calibrated January 9, 2007.

CONCLUSION

Analysis of the partial proof field measurement data reveals that all of the WNJE monitor points continue to be within FCC maximum permitted values for all modes of operation. The partial proof analysis indicates minor changes were observed on the field strength of the measured radials. These changes are well within the normal operating tolerances of directional antenna systems. The WDVR construction has not adversely affected WNJE.

DECLARATION

The foregoing was prepared by or under the immediate supervision of Charles A. Hecht of Charles A. Hecht & Associates, Inc., Pittstown, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. All statements herein are true and correct of his knowledge except such statements made on information and belief, and as to those statements, he believes them to be true and correct under the penalty of perjury.

Respectfully submitted,

Charles A. Hecht  
Charles A. Hecht & Associates, Inc.  
16 Doe Run  
Pittstown, New Jersey 08867  
(908) 730-7959  
June 2, 2009

TABLE 1

FIELD STRENGTH MEASUREMENT ANALYSIS

15 KILOWATT DAYTIME PATTERN

WNJE 1040 KILOHERTZ

FLEMINGTON, NEW JERSEY

JUNE 2009

RADIAL 35.5 DEGREES TRUE

<u>Point Number</u>	<u>Distance Km</u>	<u>Date/Time Local</u> 6/4/08	<u>Before mV/m</u>	<u>Date/Time Local</u> 5/20/09	<u>After mV/m</u>	<u>Ratio Before/After</u>
6 MP*	1.98	1010	41.0	1345	48.0	1.171
9	2.30	1013	35.2	1351	40.5	1.151
13	3.85	1022	11.7	1355	11.8	1.009
14	5.65	1027	8.20	1439	8.90	1.085
15	5.83	1031	9.00	1437	10.2	1.133
16	7.88	1038	8.80	1442	10.1	1.148
17	9.58	1044	7.40	1446	8.00	1.081
18	10.99	1049	2.00	1451	2.00	1.000
19	12.08	1055	1.60	1545	1.75	1.094
Average Ratio						1.097

\*FCC maximum permitted value is 60.2 mv/m.

TABLE 2

FIELD STRENGTH MEASUREMENT ANALYSIS

15 KILOWATT DAYTIME PATTERN

WNJE 1040 KILOHERTZ

FLEMINGTON, NEW JERSEY

JUNE 2009

RADIAL 69 DEGREES TRUE

<u>Point Number</u>	<u>Distance Km</u>	<u>Date/Time Local</u> 6/4/08	<u>Before mV/m</u>	<u>Date/Time Local</u> 5/19/09	<u>After mV/m</u>	<u>Ratio Before/After</u>
11	2.00	1120	29.3	1347	27.2	0.928
13 MP*	5.00	1127	7.65	1402	8.10	1.059
14	6.17	1132	5.05	1407	5.80	1.149
15	7.32	1136	6.20	1412	5.40	0.871
16	8.32	1141	2.70	1416	3.00	1.111
17	8.98	1148	2.20	1421	2.31	1.050
18	9.18	1151	2.40	1419	2.22	0.925
19	10.81	1157	1.90	1428	1.82	0.958
20	11.13	1200	1.95	1426	2.05	1.051
Average Ratio						1.011

\*FCC maximum permitted value is 10.6 mv/m.

TABLE 3

FIELD STRENGTH MEASUREMENT ANALYSIS

15 KILOWATT DAYTIME PATTERN

WNJE 1040 KILOHERTZ

FLEMINGTON, NEW JERSEY

JUNE 2009

RADIAL 102.5 DEGREES TRUE

<u>Point Number</u>	<u>Distance Km</u>	<u>Date/Time Local</u> 6/4/08	<u>Before mV/m</u>	<u>Date/Time Local</u> 5/19/09	<u>After mV/m</u>	<u>Ratio Before/After</u>
7 MP*	1.97	1313	56.0	1358	56.0	1.000
11	4.06	1322	14.8	1402	15.3	1.034
12	5.63	1330	5.80	1406	5.20	0.897
13	6.18	1337	4.50	1411	5.15	1.144
14	6.66	1342	1.80	1415	1.75	0.972
16	7.55	1351	2.35	1418	2.22	0.945
17	9.24	1400	1.60	1427	1.43	0.894
18	10.33	1407	1.55	1432	1.70	1.097
19	12.32	1414	2.00	1438	2.00	1.000
Average Ratio						0.998

\*FCC maximum permitted value is 65.3 mv/m.

TABLE 4

FIELD STRENGTH MEASUREMENT ANALYSIS

15 KILOWATT DAYTIME PATTERN

WNJE 1040 KILOHERTZ

FLEMINGTON, NEW JERSEY

JUNE 2009

RADIAL 249 DEGREES TRUE

<u>Point Number</u>	<u>Distance Km</u>	<u>Date/Time Local</u>	<u>Before mV/m</u>	<u>Date/Time Local</u>	<u>After mV/m</u>	<u>Ratio Before/After</u>
		6/6/08		5/20/09		
8 MP*	2.20	1130	160	1215	150	0.938
12	3.13	1135	145	1219	126	0.869
13	4.50	1140	51.0	1225	62.0	1.216
14	7.63	1148	15.8	1230	15.1	0.956
15	8.51	1159	14.0	1241	17.0	1.214
16	10.50	1207	8.00	1246	10.0	1.250
17	11.80	1214	8.70	1249	10.1	1.161
18	13.60	1221	6.60	1253	7.00	1.061
19	15.60	1229	5.70	1258	5.65	0.991
Average Ratio						1.073

\*FCC maximum permitted value is 231.4 mv/m.

TABLE 5  
 FIELD STRENGTH MEASUREMENT ANALYSIS  
 7.5 KILOWATT CRITICAL HOURS PATTERN  
 WNJE 1040 KILOHERTZ  
 FLEMINGTON, NEW JERSEY  
 JUNE 2009

RADIAL 42.5 DEGREES TRUE

<u>Point Number</u>	<u>Distance Km</u>	<u>Date/Time Local</u> 6/27/08	<u>Before mV/m</u>	<u>Date/Time Local</u> 5/25/09	<u>After mV/m</u>	<u>Ratio Before/After</u>
11 MP*	2.23	1030	30.5	944	30.5	1.000
13	4.21	1035	10.0	949	8.10	0.810
14	6.12	1040	5.10	956	7.60	1.490
15	7.29	1048	3.30	1002	2.31	0.700
16	8.64	1054	3.20	1011	2.05	0.641
17	9.20	1101	3.65	1016	4.05	1.110
18	10.50	1108	2.52	1022	2.90	1.151
19	11.20	1113	1.35	1028	0.94	0.696
20	12.27	1119	1.69	1034	1.70	1.006
Average Ratio						0.956

\*FCC maximum permitted value is 37.6 mv/m.

TABLE 6

FIELD STRENGTH MEASUREMENT ANALYSIS

7.5 KILOWATT CRITICAL HOURS PATTERN

WNJE 1040 KILOHERTZ

FLEMINGTON, NEW JERSEY

JUNE 2009

RADIAL 69 DEGREES TRUE

<u>Point Number</u>	<u>Distance Km</u>	<u>Date/Time Local</u> 6/27/08	<u>Before mV/m</u>	<u>Date/Time Local</u> 5/21/09	<u>After mV/m</u>	<u>Ratio Before/After</u>
11	2.00	1134	27.2	1200	25.3	0.930
13 MP*	5.00	1139	7.70	1205	7.00	0.909
14	6.17	1143	6.40	1209	5.90	0.922
15	7.32	1148	6.00	1215	5.30	0.883
16	8.32	1152	3.25	1220	2.90	0.892
17	8.98	1157	2.38	1225	2.10	0.882
18	9.18	1200	2.60	1228	2.30	0.885
19	10.81	1206	1.68	1233	1.52	0.905
20	11.13	1209	1.80	1240	1.65	0.917
Average Ratio						0.903

\*FCC maximum permitted value is 12.5 mv/m.

TABLE 7

FIELD STRENGTH MEASUREMENT ANALYSIS

7.5 KILOWATT CRITICAL HOURS PATTERN

WNJE 1040 KILOHERTZ

FLEMINGTON, NEW JERSEY

JUNE 2009

RADIAL 95 DEGREES TRUE

<u>Point Number</u>	<u>Distance Km</u>	<u>Date/Time Local</u> 7/2/08	<u>Before mV/m</u>	<u>Date/Time Local</u> 5/25/09	<u>After mV/m</u>	<u>Ratio Before/After</u>
7 MP*	1.85	1300	45.0	1145	53.5	1.189
11	3.98	1305	22.0	1150	22.2	1.009
12	5.44	1308	7.90	1154	6.95	0.880
13	7.01	1312	6.70	1158	5.40	0.806
14	7.45	1316	4.65	1201	3.50	0.753
15	8.40	1319	4.44	1204	3.70	0.833
16	8.71	1323	4.20	1208	3.70	0.881
17	9.95	1329	3.85	1215	3.95	1.026
18	10.72	1338	2.25	1223	3.00	1.333
Average Ratio						0.968

\*FCC maximum permitted value is 60.0 mv/m.

TABLE 8

FIELD STRENGTH MEASUREMENT ANALYSIS

7.5 KILOWATT CRITICAL HOURS PATTERN

WNJE 1040 KILOHERTZ

FLEMINGTON, NEW JERSEY

JUNE 2009

RADIAL 249 DEGREES TRUE

<u>Point Number</u>	<u>Distance Km</u>	<u>Date/Time Local</u> 7/13/08	<u>Before mV/m</u>	<u>Date/Time Local</u> 5/21/09	<u>After mV/m</u>	<u>Ratio Before/After</u>
8 MP*	2.20	1454	121	1320	132	1.091
12	3.13	1458	105	1324	115	1.095
13	4.50	1502	39.0	1327	45.0	1.154
14	7.63	1510	11.1	1335	12.0	1.077
15	8.51	1517	10.1	1342	11.5	1.139
16	10.50	1525	8.80	1351	10.3	1.170
17	11.80	1531	7.30	1357	8.00	1.096
18	13.60	1538	4.00	1404	4.30	1.075
19	15.60	1548	4.80	1412	5.00	1.042
Average Ratio						1.104

\*FCC maximum permitted value is 164.5 mv/m.

TABLE 9

FIELD STRENGTH MEASUREMENT ANALYSIS

1.5 KILOWATT NIGHTTIME PATTERN

WNJE 1040 KILOHERTZ

FLEMINGTON, NEW JERSEY

JUNE 2009

RADIAL 18 DEGREES TRUE

<u>Point Number</u>	<u>Distance Km</u>	<u>Date/Time Local 7/13/08</u>	<u>Before mV/m</u>	<u>Date/Time Local 5/30/09</u>	<u>After mV/m</u>	<u>Ratio Before/After</u>
8	2.45	915	38.5	1509	40.0	1.039
12	3.41	919	30.0	1516	30.5	1.017
13	3.64	923	33.5	1518	28.8	0.860
14	5.10	929	12.6	1521	19.0	1.508
15	5.35	936	9.90	1524	11.0	1.111
16	5.76	940	14.0	1526	9.10	0.650
17	6.11	945	11.9	1528	14.0	1.176
18	6.91	949	6.20	1530	9.20	1.484
19	8.58	954	5.85	1535	6.30	1.077
Average Ratio						1.102

TABLE 10

FIELD STRENGTH MEASUREMENT ANALYSIS

1.5 KILOWATT NIGHTTIME PATTERN

WNJE 1040 KILOHERTZ

FLEMINGTON, NEW JERSEY

JUNE 2009

RADIAL 178 DEGREES TRUE

<u>Point Number</u>	<u>Distance Km</u>	<u>Date/Time Local</u> 7/13/08	<u>Before mV/m</u>	<u>Date/Time Local</u> 5/30/09	<u>After mV/m</u>	<u>Ratio Before/After</u>
7	2.34	1011	96.0	1346	68.0	0.708
12	4.21	1017	34.0	1354	46.0	1.353
13	6.11	1024	13.5	1400	10.5	0.778
14	6.78	1030	17.0	1402	15.8	0.929
15	7.34	1038	15.1	1405	13.5	0.894
16	8.17	1044	6.10	1410	5.90	0.967
17	9.11	1052	8.65	1418	7.00	0.809
18	10.12	1059	6.00	1421	5.40	0.900
19	11.30	1104	3.30	1424	4.80	1.455

Average Ratio 0.977

TABLE 11

FIELD STRENGTH MEASUREMENT ANALYSIS

1.5 KILOWATT NIGHTTIME PATTERN

WNJE 1040 KILOHERTZ

FLEMINGTON, NEW JERSEY

JUNE 2009

RADIAL 251.5 DEGREES TRUE

<u>Point Number</u>	<u>Distance Km</u>	<u>Date/Time Local</u> 7/13/08	<u>Before mV/m</u>	<u>Date/Time Local</u> 5/30/09	<u>After mV/m</u>	<u>Ratio Before/After</u>
8 MP*	2.18	1124	8.80	1207	7.80	0.886
12	3.10	1128	7.21	1216	7.40	1.026
13	4.49	1134	2.92	1220	3.20	1.096
14	7.49	1141	0.81	1226	0.56	0.691
15	8.36	1152	0.64	1240	0.62	0.969
16	8.93	1156	0.19	1244	0.20	1.053
17	10.10	1200	0.60	1246	0.51	0.850
18	11.90	1209	0.33	1302	0.29	0.879
19	13.80	1218	0.23	1254	0.185	0.804
Average Ratio						0.917

\*FCC maximum permitted value is 13.7 mv/m.

TABLE 12

FIELD STRENGTH MEASUREMENT ANALYSIS

1.5 KILOWATT NIGHTTIME PATTERN

WNJE 1040 KILOHERTZ

FLEMINGTON, NEW JERSEY

JUNE 2009

RADIAL 289 DEGREES TRUE

<u>Point Number</u>	<u>Distance Km</u>	<u>Date/Time Local</u> 7/13/08	<u>Before mV/m</u>	<u>Date/Time Local</u> 5/30/09	<u>After mV/m</u>	<u>Ratio Before/After</u>
13 MP*	2.85	1332	7.65	1344	7.95	1.039
14	6.00	1340	1.33	1341	0.86	0.647
15	6.87	1345	1.61	1345	1.70	1.056
16	7.04	1348	1.08	1349	1.40	1.296
17	7.20	1351	1.87	1353	2.08	1.112
18	7.53	1355	1.49	1356	1.73	1.161
19	7.72	1400	1.60	1400	1.30	0.813
20	8.14	1404	0.96	1406	1.20	1.250
21	9.35	1412	0.99	1415	1.10	1.111
Average Ratio						1.054

\*FCC maximum permitted value is 8.54 mv/m.