ATTACHMENT II
KOOQ Night Directional Pattern
Partial Proof-of-Performance

prepared for

Eagle Communications, Inc.
KOOQ North Platte, Nebraska
Facility ID 69701
1410 kHz 5 kW-D 0.5 kW-N DA-N U

Table of Contents

Engineering Statement
2008 Nighttime Partial Proof of Performance
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Introduction

This Attachment has been prepared on behalf of *Eagle Communications, Inc.* ("*Eagle*"), licensee of AM radio station KOOQ, North Platte, Nebraska (Facility ID 69701). KOOQ(AM) operates at 5 kW into a non-directional antenna system during daytime hours, and 0.5 kW into a directional antenna system during nighttime hours.

Eagle is also the permittee of FM Station KNPQ Hershey, Nebraska (Facility ID 164169 – FCC File Number BMPH-20071115AEB). *Eagle* recently completed construction of KNPQ(FM), which involved the side-mounting of a new FM antenna on an existing tower located 2.93 km from the KOOQ transmitter site. As such, the FCC attached a "condition" on the KNPQ Construction Permit ("CP") that a demonstration be provided that the KNPQ(FM) implementation did not adversely impact the KOOQ nighttime directional antenna operation. In particular, the condition indicated that a "before" and "after" construction "partial proof-of-performance" ("partial proof") be conducted on KOOQ in accordance with the methods outlined in Section 73.154(a) of the Commission's Rules. The construction logistics did not permit the completion of a before partial proof in time for the mounting of the FM antenna system and transmission line. However, a post-construction partial proof *was* completed, which was referenced against the original full proof of performance, the results of which are provided herein. As will be shown in the following, the KOOQ(AM) directional antenna system has not been adversely affected by the FM station construction; KOOQ is operating within its authorized standard pattern in accordance with its license.

Nighttime Partial Proof (Method and Data Analysis)

Directional measurements were conducted with the as-found KOOQ nighttime antenna monitor parameters. These parameters, which were established in the existing KOOQ license, were found to be within the limits specified in Section 73.62 of the Commission's Rules. The input current to the nighttime phasing system common-point matching network (common point current) was checked and found to be operating at a correct current to achieve the authorized power level (which was established pursuant to §73.51(b)(1) of the Commission's Rules). Field Strength measurements were then taken along points established for the two monitored nighttime radials (282.68° and 355°) in the station's last full proof of performance (of 1965) and in the proof radials immediately adjacent to these monitored radials (30°, 230°, and 320°), per Section 73.154(a) of the Commission's Rules.

All measurements were taken between two hours after local sunrise and two hours before local sunset. Information regarding the date, time, distance from the site, and field intensity observed for each measurement location is included in **Attachment II - Table I**. The unattenuated field strength at one kilometer for the nighttime directional operation was determined by the logarithmic ratio analysis method, as shown in the tabulation. The baseline for the partial proof reference was the directional fields tabulated in the last complete full proof-of-performance conducted on KOOQ in similar environmental conditions in December of 1965 when the station had the call sign KNOP. As shown, all analyzed field strengths are within KOOQ's authorized standard radiation pattern.

Conclusion

The KOOQ nighttime antenna system is operating within its standard pattern limits, based upon an analysis of the partial proof-of-performance information reported herein. The KOOQ common point current and antenna parameters remain unchanged and are operating within the normal tolerances specified in the Commission's Rules. Accordingly, it is believed that the construction of the KNPQ(FM) facility did not have an adverse impact on the KOOQ(AM) operation.

The undersigned hereby certifies that the foregoing statement was prepared by him or under his direction, and that it is true and correct to the best of his knowledge and belief.

Garrison C. Cavell - February 28, 2008

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Attachment II - Table I
Partial Proof Analysis
2008 Data Referened to Original (1965) Proof

30° Radial

Distance (miles)	Distance (km)	Point	1965 DA (mV/m)	2008 Date	2008 Time	2008 DA (mV/m)	Ratio of 2008/1965	Log Ratio 2008/1965
2.00	3.22	19	**38**	2/25/2008	11:09	**42**	1.1053	0.0435
2.50	4.02	20	**30**	2/25/2008	11:15	**36**	1.2000	0.0792
3.00	4.83	21	**22.95**	2/25/2008	11:33	**23**	1.0022	0.0009
3.50	5.63	22	**21**	2/25/2008	11:47	**18.5**	0.8810	-0.0550
4.00	6.44	23	**15.5**	2/25/2008	11:35	**16.5**	1.0645	0.0272
4.50	7.24	24	**10.5**	2/25/2008	11:48	**12**	1.1429	0.0580
5.00	8.05	25	**11**	2/25/2008	12:02	**10.5**	0.9545	-0.0202
5.50	8.85	26	**9.5**	2/25/2008	12:15	**9**	0.9474	-0.0235

Average Ratio: **1.0372** 0.0138
Antilog **1.0322**

Analyzed 1965 DA Radiation: **125** mV/m/mi
Metric Conversion of 1965 DA field: 201.17 mV/m/km

2008 Field: ***207.64*** ***mV/m/km***

Augmented Standard Pattern Limit: 210.65 mV/m/km

Result 98.6% of standard

230° Radial

Distance (miles)	Distance (km)	Point	1965 DA (mV/m)	2008 Date	2008 Time	2008 DA (mV/m)	Ratio of 2008/1965	Log Ratio 2008/1965
2.00	3.22	17	**60**	2/25/2008	9:57	**49**	0.8167	-0.0880
2.75	4.43	19	**43**	2/25/2008	9:52	**42**	0.9767	-0.0102
4.05	6.52	21	**23.75**	2/25/2008	9:37	**26**	1.0947	0.0393
4.55	7.32	22	**15**	2/25/2008	9:42	**22**	1.4667	0.1663
5.56	8.95	23	**20.5**	2/25/2008	10:10	**17.5**	0.8537	-0.0687
6.10	9.82	24	**16**	2/25/2008	10:15	**13.25**	0.8281	-0.0819
7.60	12.23	25	**11.25**	2/25/2008	10:22	**12**	1.0667	0.0280
10.00	16.09	26	**9**	2/25/2008	10:30	**8.25**	0.9167	-0.0378

Average Ratio: **1.0025** -0.0066
Antilog **0.9849**

Analyzed 1965 DA Radiation: **175** mV/m/mi
Metric Conversion of 1965 DA field: 281.64 mV/m/km

2008 Field: ***277.38*** ***mV/m/km***

Augmented Standard Pattern Limit: 295.66 mV/m/km

Result 93.8% of standard

Attachment II - Table I
Partial Proof Analysis
2008 Data Referened to Original (1965) Proof

282.68° Radial (monitored)

Distance (miles)	Distance (km)	Point	1965 DA (mV/m)	2008 Date	2008 Time	2008 DA (mV/m)	Ratio of 2008/1965	Log Ratio 2008/1965
1.8	**2.90**	**17 MP**	**13.6**	2/16/2008	14:30	**21.5**	1.5809	0.1989
3.00	4.83	20	**8.5**	2/25/2008	14:00	**6.8**	0.8000	-0.0969
4.00	6.44	22	**4.3**	2/25/2008	14:15	**5.2**	1.2093	0.0825
5.00	8.05	25	**4**	2/25/2008	14:27	**3.8**	0.9500	-0.0223
5.18	8.34	26	**2.5**	2/25/2008	15:10	**3.7**	1.4800	0.1703
5.50	8.85	27	**3.6**	2/25/2008	15:17	**3.1**	0.8611	-0.0649
6.00	9.66	28	**1.6**	2/25/2008	15:30	**3**	1.8750	0.2730
8.00	12.87	29	**2**	2/25/2008	16:05	**2.1**	1.0500	0.0212
10.00	16.09	30	**0.64**	2/25/2008	16:27	**1**	1.5625	0.1938

"MP" = Monitor Point

Average Ratio: **1.2632** 0.0840
Antilog **1.2133**

Analyzed 1965 DA Radiation: **30** mV/m/mi
Metric Conversion of 1965 DA field: 48.28 mV/m/km

2008 Field: ***58.58*** ***mV/m/km***

Augmented Standard Pattern Limit: 71.76 mV/m/km

Result 81.6% of standard

320° Radial

Distance (miles)	Distance (km)	Point	1965 DA (mV/m)	2008 Date	2008 Time	2008 DA (mV/m)	Ratio of 2008/1965	Log Ratio 2008/1965
2.0	3.22	19	**34.5**	2/25/2008	15:14	**45.5**	1.3188	0.1202
2.5	4.02	20	**33.5**	2/25/2008	15:00	**37**	1.1045	0.0432
3.0	4.83	21	**27.5**	2/25/2008	14:56	**28**	1.0182	0.0078
3.8	6.12	24	**23.5**	2/25/2008	14:47	**22**	0.9362	-0.0286
4.0	6.44	25	**16.5**	2/25/2008	15:27	**18.5**	1.1212	0.0497
4.5	7.24	26	**13**	2/25/2008	15:35	**14**	1.0769	0.0322
5.0	8.05	27	**12**	2/25/2008	15:42	**13**	1.0833	0.0348
5.5	8.85	28	**11**	2/25/2008	15:57	**10**	0.9091	-0.0414
6.0	9.66	29	**10**	2/25/2008	16:08	**7.5**	0.7500	-0.1249

Average Ratio: **1.0354** 0.0103
Antilog **1.0240**

Analyzed 1965 DA Radiation: **125** mV/m/mi
Metric Conversion of 1965 DA field: 201.17 mV/m/km

2008 Field: ***206.00*** ***mV/m/km***

Augmented Standard Pattern Limit: 210.65 mV/m/km

Result 97.8% of standard

Attachment II - Table I
Partial Proof Analysis
2008 Data Referened to Original (1965) Proof

355° Radial (monitored)

Distance (miles)	Distance (km)	Point	1965 DA (mV/m)	2008 Date	2008 Time	2008 DA (mV/m)	Ratio of 2008/1965	Log Ratio 2008/1965
1.8	2.90	**17 MP**	**68**	2/26/2008	14:41	**64**	0.9412	-0.0263
2.0	3.22	19	**57**	2/25/2008	13:53	**54.5**	0.9561	-0.0195
2.5	4.02	20	**40**	2/25/2008	14:08	**37**	0.9250	-0.0339
3.0	4.83	21	**25**	2/25/2008	14:12	**28.75**	1.1500	0.0607
3.5	5.63	22	**25**	2/25/2008	14:17	**25.5**	1.0200	0.0086
4.0	6.44	23	**19**	2/25/2008	14:21	**22**	1.1579	0.0637
4.5	7.24	24	**18.5**	2/25/2008	14:28	**17**	0.9189	-0.0367
5.0	8.05	25	**15**	2/25/2008	14:37	**15.5**	1.0333	0.0142
5.5	8.85	26	**13.5**	2/25/2008	14:42	**11.5**	0.8519	-0.0696

"MP" = Monitor Point

Average Ratio:	**0.9949**	-0.0043
	Antilog	**0.9901**
Analyzed 1965 DA Radiation:	**154**	mV/m/mi
Metric Conversion of 1965 DA field:	247.84	mV/m/km
2008 Field:	***245.39***	***mV/m/km***
Augmented Standard Pattern Limit:	260.12	mV/m/km
Result	94.3%	of standard