

## -Info-Public Service Commission

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**From:** Emmy Baskerville <ebaskerville@houstoneng.com>  
**Sent:** Wednesday, August 13, 2014 2:19 PM  
**To:** -Info-Public Service Commission  
**Subject:** FW: Minnkota Center to Grand Forks 375 kV (Case No. PU-09-670) Permit Compliance Visit field notes  
**Attachments:** MBN INSPECTION REPORT CENTER-GRAND FORKS 8-4-2014 TO 8-6-2014.xlsx; MBN\_Photos\_Aug\_4-6-2014.pdf; field\_notes\_7-2014.pdf

Please find the attached construction compliance field notes for Case No. PU-09-670.

Thank you,

**Emmy Baskerville**

Environmental Scientist  
Houston Engineering, Inc.  
O 763.493.4522 | D 763.493.6669 | F 763.493.5572

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**From:** Emmy Baskerville  
**Sent:** Wednesday, August 13, 2014 11:28 AM  
**To:** Lein, Jerry R. ([jlein@nd.gov](mailto:jlein@nd.gov))  
**Cc:** Bart Schultz; [Kevin.Berreth@mbnengr.com](mailto:Kevin.Berreth@mbnengr.com)  
**Subject:** RE: Minnkota Center to Grand Forks 375 kV (Case No. PU-09-670) Permit Compliance Visit field notes

Jerry,

Please find the attached field notes (preliminary inspection report) and photographs regarding the Minnkota Center to Grand Forks 375 kV (Case No. PU-09-670) transmission line, per contract number PU-668-12. MBN Engineering was on site last week (August 4-6, 2014) to inspect permit compliance with regard to engineering and construction. MBN began inspections on the west end of the transmission line and continued east toward Grand Forks, ND. MBN will be completing additional inspections next week. I will be following up next week with a full progress report.

Thank you,

**Emmy Baskerville**

Environmental Scientist  
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**From:** Emmy Baskerville  
**Sent:** Thursday, July 31, 2014 2:55 PM  
**To:** Lein, Jerry R. ([jlein@nd.gov](mailto:jlein@nd.gov)); 'Prescott, Julie S.'  
**Cc:** Bart Schultz  
**Subject:** Minnkota Center to Grand Forks 375 kV (Case No. PU-09-670) Permit Compliance Visit field notes

Jerry & Julie,

Houston Engineering completed a permit compliance inspection site visit for the Minnkota Center to Grand Forks 375 kV (Case No. PU-09-670) transmission line last week (7/21-7/25). We inspected poles 1-790 & 805-821. Per contract number PU-668-12, attached are our field notes from the site visit. No major permit non-compliance items were identified. Several access road areas were observed to require restoration (areas where the mats had been recently

removed and rutting was observed), however HEI observed active restoration activities occurring at the time of our site visit.

MBN Engineering (MBN) will be completing their inspections of the engineering and construction within the next couple weeks. HEI will follow-up with a summary progress report in the next several weeks, and once MBN's inspection has been completed, we will compile a final Construction Inspection Report will be prepared for the Commission to summarize our overall findings.

Thank you,

**Emmy Baskerville**

Environmental Scientist  
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NORTH DAKOTA PUBLIC SERVICE COMMISSION  
CENTER-GRAND FORKS 345KV TRANSMISSION LINE INSPECTION  
DATE: 8-12-2014

PRELIMINARY INSPECTION REPORT

DATES OF INSPECTION: AUGUST 4 THRU AUG 6, 2014  
INSPECTOR: KEVIN J. BERRETH, MBN ENGINEERING, INC.

Houston Engineering, Inc. and MBN Engineering were contractually hired by the North Dakota Public Service Commission to complete the construction inspection activities, as part of the Minnkota Power Cooperative Center-Grand Forks 345kV transmission line construction project(PU-09-670). The following is a summary of the work completed to date by MBN Engineering.

On August 4-6, 2014, Kevin Berreth of MBN Engineering started at the west end of this transmission line just east of the Milton R. Young Generating Station and continued east toward Grand Forks, ND. Due to time and budget constraints, and due to limited access, not all structures were inspected.

SOVEREIGN LAND PERMIT NO. S-1755 - Permit to construct transmission line across the Missouri River in Oliver and Burleigh Counties. Poles 68 and 69 were inspected on the west side of the river. Construction activities were complete in this area. See picture "STR 69 BASE LOOKING EAST MISSOURI RIVER.JPG". It appears that all material excavated for the drilled pier foundations has been removed from the site. The drilled piers were backfilled by rip-rap just above normal grade, and the area seems to be graded uniformly. See picture "STR 70 LOOKING EAST ACROSS MISSOURI RIVER.JPG". Marker balls were installed on the shield wires. It appears spacers were installed on the conductors. Plan and profile drawing state that they are maintaining 30' of clearance over the river above the 100 year flood elevation. This could not be verified as would require extensive survey. The west side of the river appears to be in compliance with the sovereign land permit No. S-1755. The east side of the river was not inspected at close range due to access.

SOVEREIGN LAND PERMIT NO. S-1758 - Permit to cross the Sheyenne River in Griggs County. Did not inspect this river crossing at close range as Houston Engineering had already done so. See Status Summary Report #2 from Houston Engineering.

SOVEREIGN LAND PERMIT NO. S-1756 - Permit to cross the James River in Wells County: Poles 501-503 were inspected and did not identify anything that would be out of compliance with this permit.

SOVEREIGN LAND PERMIT NO. S-1757 - Permit to cross the James River in Eddy County: Poles 740-741 were inspected and did not identify anything that would be out of compliance with this permit.

Special Use Permit 12-LM-60-1076: Permit to cross the Mcklusky Canal

The permit granted permission to cross the canal in two locations. These are between Str #220-221 and #352-353.

Item 3 of the "Special Conditions" states that the overhead wires across the canal ROW shall have a minimum clearance of 40' above ground at 120 deg F. This could not be field verified without additional survey. However, between Str 220-221, the plan and profile drawings show about 36' of clearance on the south side of the canal and about 40' of ground clearance on the north side with conductors plotted at what I believe to be 212 deg F. The clearance over the water in the canal at time of survey appears to be about 48' with conductors at 212 deg F. At crossing between #352-353, the plan and profile scales at about 40' of ground clearance over both high sides of the canal. Also, there appears to be about 80+ feet of clearance over the water in the canal.

Item 4 of "Special Conditions" states that MPC shall install and maintain fence grounding. Verified that fence is grounded by structure #220. At structure #221, the fence posts were installed but no wires were installed hence no need for fence grounding until wires installed. At Str #352, it was verified that the fence is grounded on both sides of a new gate that was probably installed for construction purposes.

Item 5 of "Special Conditions" states that "Overhead warning signs must be installed facing traffic that show the clearance and electrical line voltage". I DID NOT SEE ANY SUCH SIGNS AT BOTH CROSSINGS

Item 6 of "Special Conditions" states that electrical lines shall cross perpendicular to the centerline of the canal. Both crossings verified that they are crossing perpendicular, or very close to perpendicular, to the canal.

Item 7 of "Special Conditions" states that avian avoidance and visibility enhancement devices are to be installed. Verified that bird flight diverters were installed on the shield wires guessing about every 150-200' but no avian avoidance devices were installed on any of the conductors.

Item 8 of "Special Conditions" states that disturbed areas are to be repaired and seeded. It appeared that all areas within the transmission right of way were in good condition.

STRUCTURE #256: See picture "STR 256 JUST NORTH OF-CONSTR MATTING LOOK E.JPG". Just north of structure #256 on the east west minimum maintenance road, construction matting is still layed out in the low areas of the road and some is stacked up along side the road.

STRUCTURE #753; See picture "STR 753 LOOK E CONSTR MATTING.JPG"; On both sides of the road in the ditches, there still remains construction matting.

GENERAL INSPECTION NOTES: A lot of other structures were inspected along this entire route. General clearances to ground, other power lines, and other aerial obstacles was inspected(not measured) and appear to be in compliance with National Electrical Safety Code. In order to verify that the entire line is in compliance with NESC it would require extensive survey. I can elaborate on the structures that were visited at close range, or from a distance, in the final report if required.

FURTHER INSPECTION; Another field inspection is required to verify compliance with the FAA permits around the Grand Forks Airport. This inspection is planned for the week of Aug 18. Will provide field report after inspection.

Pole Name	Sort Name	Critical habitat for TLE	Unique/Rare plant and animal species	Wetlands Management Area (WMA)	Historical / Archaeological Resources	Residence, school, business	Water sources (McClusky Canal)	National Scenic Trail, Historical Trail, McClusky Canal	Floodplain	Wetlands, woodlands, wooded areas	Animal health and safety	Plant Life	NOTES
1	0001								Compliant				Not in floodplain.
2	0002												
3	0003												
4	0004												
5	0005												
6	0006												
7	0007												
8	0008			Compliant									Outside of wma
9	0009			Compliant									Outside of wma
10	0010												GPS'd pole location
11	0011												
12	0012												
13	0013												
14	0014												
15	0015												
16	0016												
17	0017												
18	0018								Compliant				Not in wetland.
19	0019												
20	0020												
21	0021												
22	0022												
23	0023												State trust
24	0024												
25	0025												
26	0026								Compliant				Not in wetland
27	0027												Good archeological site observed outside of pole location
28	0028												
29	0029												
30	0030												
31	0031												Road repair occurring.
32	0032												
33	0033												
34	0034												
35	0035												
36	0036												
37	0037												
38	0038												GPS'd; compliant with vicinity to home
39	0039												
40	0040												
41	0041												
42	0042												
43	0043												
44	0044												
45	0045												
46	0046												
47	0047												
48	0048												
49	0049												
50	0050												
51	0051								Compliant				Not in wetland.
52	0052												
53	0053												
54	0054												
55	0055												
56	0056												
57	0057												
58	0058												
59	0059												
60	0060								Compliant	Compliant			Not in wetland
61	0061												Outside of floodplain
62	0062												
63	0063												
64	0064								Compliant				Not in wetland.
65	0065												
66	0066												Restoration needed in wetland from construction mats. INCOMPLIANT
67	0067												
68	0068	Compliant	Compliant										GPS'd; compliant with vicinity to home
69	0069	Compliant	Compliant						Compliant	Compliant	Compliant		Pole in wetland, rutting from mat removal observed, restoration needed. INCOMPLIANT
70	0070	Compliant	Compliant						N/A	Compliant	Compliant		Constructed in a.g. shield wires observed. Pole constructed outside of Piping Plover nesting
71	0071												
72	0072												Pole constructed outside of Piping Plover nesting, shield wires observed
73	0073												
74	0074												
75	0075												
76	0076												
77	0077												
78	0078												
79	0079												
80	0080												
81	0081												
82	0082												
83	0083								Compliant				
84	0084												
85	0085												
86	0086												
87	0087												
88	0088												
89	0089												
90	0090												
91	0091												
92	0092												
93	0093												
94	0094												
95	0095												
96	0096												
97	0097												
98	0098												
99	0099												
100	0100												
101	0101												
102	0102												
103	0103												
104	0104												
105	0105												
106	0106												Archaeological site avoided
107	0107												Archaeological site avoided
108	0108												
109	0109												
110	0110								Compliant				In wetland.
111	0111												
112	0112												
113	0113												
114	0114												
115	0115												
116	0116												
117	0117												
118	0118												
119	0119				Compliant				Compliant				Outside of archaeological site, and floodplain.
120	0120												
121	0121												
122	0122												
123	0123												
124	0124												
125	0125												
126	0126												
127	0127												
128	0128												
129	0129												
130	0130												
131	0131								Compliant				Aq only, not in floodplain
132	0132								Compliant	Compliant			Outside of wetland, likely in floodplain
133	0133												
134	0134									Compliant			pasture.
135	0135												135 in wetland
136	0136												GPS'd; compliant with vicinity to home
137	0137												
138	0138												
139	0139												
140	0140												
141	0141									Compliant			In wetland.
142	0142												
143	0143												
144	0144									Compliant			Out of wetland
145	0145												
146	0146												
147	0147												
148	0148									Compliant			Outside of wetland.
149	0149												
150	0150								Compliant	Compliant			Out of wetland / floodplain
151	0151												
152	0152												
153	0153									Compliant			Not in floodplain
154	0154												Compliant with vicinity to home
155	0155												
156	0156												Second pole
157	0157												Construction debris observed
158	0158												
159	0159												
160	0160												
161	0161												
162	0162												Construction debris adjacent to road
163	0163												
164	0164									Compliant			
165	0165									Compliant			Edge of wetland, not in wetland
166	0166												Not in wetland, snow fence present, not silk fence
167	0167												
168	0168												
169	0169												
170	0170								Compliant				











Photo 1: Pole 69 base, looking east across the Missouri River.

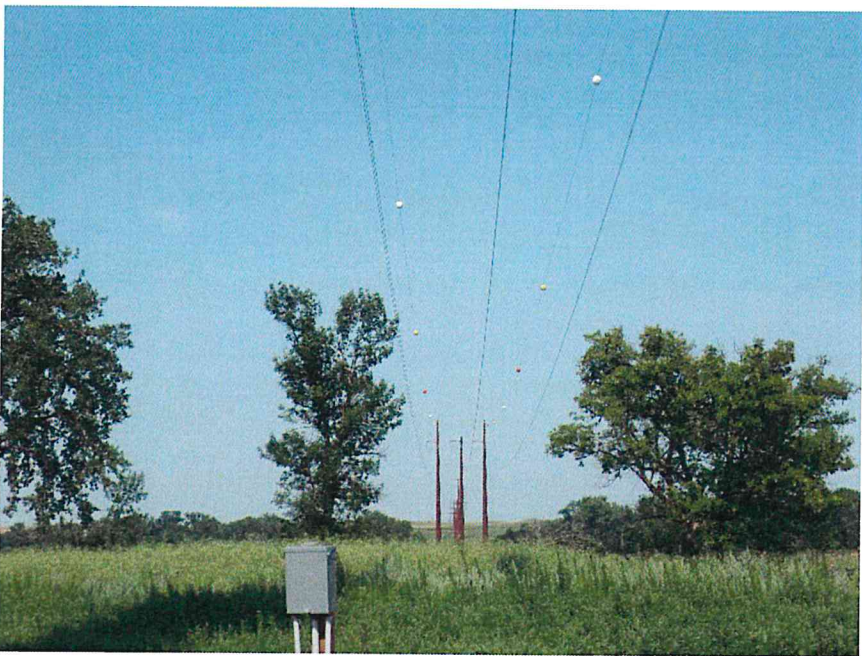


Photo 2: Pole 70, looking east across Missouri River.



Photo 3: Pole 256 showing construction matting, looking east.



Photo 4: Pole 753, showing construction matting, looking east.