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## **SECTION 1: INTRODUCTION AND METHODOLOGY**

### **1.1 INTRODUCTION**

Basin Electric Power Cooperative (Basin Electric) is a regional wholesale electric generation and transmission cooperative. On November 12, 2014, Basin filed an application with the North Dakota Public Service Commission (Commission) requesting authorization to construct the North Killdeer Loop Phase I 345 kV Transmission Project (Project), PU-14-813.

The Project consists of the construction of twenty-eight miles of 345 kV electric transmission line and associated facilities in McKenzie County. The Commission issued its Findings of Fact, Conclusions of Law and Order (Orders) on April 29, 2015 granting the Certificate of Corridor Compatibility No. 167 and Route Permit No. 179.

E3 Environmental, LLC (E3) was contracted (Contract # PU-723-15-EE) by the Commission to provide inspection services for the Project to document compliance with the Commission's Orders. E3's contract allowed for two (2) active construction inspections and one post-construction/restoration inspection and associated inspection reports. In combination with the final inspection, E3 is to report on the overall status of compliance with the State's siting laws and Commission's Orders. Inspections were completed on April 28, 2016, July 8, 2016 and July 12, 2017. This report documents the findings of the July 12, 2017 inspection as well as documents the Project's overall compliance with the State's siting laws and the Commission's Orders.

### **1.2 METHODOLOGY**

The purpose of this report is to document the status of compliance with the Commission's siting laws and rules, commitments made within the siting applications, project plans as described in the Commission's Orders and any recommendations made by other agencies. E3's staff reviewed the documents available on the Commission's website, spoke with Basin Electric personnel and completed a field inspection to assess the Project's overall compliance.

E3's Environmental Consultant Katie Schmidt met with Basin Electric's representative Cris Miller on July 12, 2017 to complete the field inspection. The Project was visually inspected from driving access points. Photographic documentation was collected during the inspection; Appendix A contains inspection photographs



**SECTION 2: STATUS OF COMPLIANCE**

**2.1 FINDINGS OF FACT: NORTH KILLDEER LOOP PHASE I (PU-14-813)**

Number	Finding	Status
2	Basin Electric plans to construct, operate and maintain approximately 28.1 miles of new 345 kV electric transmission line including the Patent Gate 345/115 kV Substation and the Kummer Ridge 345/115 KV Substation.	Construction is complete, restoration was complete along the majority of the ROW; portion of the ROW to be re-visited to complete restoration activities near the Kummer Station. Basin has a contractor and plan to correct this area.
3	The 28.1 mile, 345 kV electric transmission line will be single circuited for approximately 27 miles and double circuited for approximately 1-mile. The transmission lines will be constructed using single-pole structures within a 150-foot-wide permanent right-of-way (ROW).	The transmission line was constructed as detailed in the Application, Docket Item No. 1.
10	Sections 5.0 and 8.11 consist of a summary of agency consultations and comments. Basin has implemented the mitigation measures described within these sections.	Mitigation measures were implemented as detailed in the Consolidated Application.
11	No permanent impacts occurred to wetlands.	No permanent impacts to wetlands were reported or observed.
12	Basin Electric has avoided cultural resources during the construction of the Project.	Cultural resource were avoided during construction.



Number	Finding	Status
13	<p>The Project was designed and constructed to comply with all relevant codes and standards of the Rural Utilities Service, the National Electric Safety Code, the Institute of Electrical and Electronics Engineers, the American Society of Civil Engineers, the American Institute of Steel Construction, the American Concrete Institute and Basin Electric standards.</p>	<p>The Project meets all applicable design codes and standards.</p>
14	<p>The transmission line was constructed on self-supporting galvanized steel single-pole structures. The typical structures are approximately 115-feet tall. The top of a pole is approximately 15-inches in diameter and the bottom of the structures are approximately 50-inches in diameter. The angle structures are single poles and have concrete foundations with no guy wires. The regular in-line structures are on concrete foundations or directly buried in the ground.</p>	<p>The transmission line was constructed as detailed in the Application, Docket Item No. 1.</p>
15	<p>The Kummer Ridge 345/115 kV Substation encompasses approximately 11 acres within a 41-acre parcel east of Watford City. The Patent Gate 345/115 kV substation is located on a 17-acre parcel within a 117 acre parcel located northeast of Alexander.</p>	<p>The Kummer Ridge Substation was constructed as detailed in the Application, Docket Item No. 1.</p>
16	<p>The Project was constructed with aluminum steel reinforced conductor, that has a 1.8 inch diameter with 76 strands of aluminum and 19 strands of steel. Above the conductor is an optical ground wire and a steel ground wire both of which are approximately a ½ in diameter. The permanent ROW is 150-feet.</p>	<p>The Project was constructed as detailed in the Application, Docket Item No. 1.</p>



Number	Finding	Status
27	Basin implemented mitigation measures to minimize indirect impacts to surface water and wetland resources, such as erosion and sedimentation control best management practices. Basin's obtained stormwater construction permits for the Project.	Basin implemented appropriate mitigation measures to prevent impacts to surface water. Basin obtained construction stormwater coverage for the Project.
28	Standard mitigation and conservation measures and best management practices as outlined in Appendix G of the Application were implemented as necessary.	Mitigation measures and best management practices were implemented detailed in the Application.
29	To help avoid impacts to avian species along the transmission route during operation, bird flight diverters have been installed as determined in consultation with the Western and the United States Fish and Wildlife Service.	Bird diverters have been installed.
30	Surveys for raptor and migratory birds were completed prior to construction of the Project with consultation from the United States Fish and Wildlife Services, Western Area Power Administration and the North Dakota Game and Fish Department.	Surveys for raptors and migratory birds were complete prior to construction as appropriate.



**2.2 ORDER: NORTH KILLDEER LOOP PHASE I (PU-14-813)**

Number	Finding	Status
4	Basin completed Class III cultural resource surveys on parcels and filed documentation with the Commission showing SHPO concurrence with the findings set forth in the associated reports prior to beginning construction on any un-surveyed parcel.	SHPO Concurrence letters were submitted and entered into the public hearing record as Exhibit 12, Docket Item No. 34.
5	Basin shall obtain Commission approval prior to any changes in structure location.	Basin filed an Amendment to Application for Consolidated Certificate of Corridor Compatibility and Route Permit, Docket Item No. 56; the Amendment was approved by the Commission and Supplemental Orders were issued; Docket Item No. 68.  Basin filed two structure relocation requests (Docket Item No. 75 and 76); both requests were approved by the Commission, Docket Item No. 77.



**2.3 ORDER PROVISIONS: NORTH KILLDEER LOOP PHASE I (PU-14-813)**

Order Number	Order Provision	Status
1	<p>Company understands and agrees that the Certificate of Site Compatibility or Route Permit issued by the Commission will be subject to the conditions and criteria set forth in Chapter 49-22 of the North Dakota Century Code and Chapter 69-06-08 of the North Dakota Administrative Code, and that Company shall be responsible for compliance with this order and conditions and criteria set forth in the applicable laws and rules.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>
2	<p>Company agrees to hold a preconstruction conference prior to commencement of any construction, which must include a Company representative, its construction supervisor, and a representative of Commission Staff, to ensure that Company fully understands the conditions set forth in the Commission's order.</p>	<p>The pre-construction call was held on May 7, 2015, the call summary notes have been docketed, Docket Item 53.</p>
3	<p>Company agrees to comply with the rules and regulations of all other agencies having jurisdiction over any phase of the proposed transmission facility including all city, township, and county zoning regulations.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>



Order Number	Order Provision	Status
4	<p>Company understands and agrees that it shall obtain all other necessary licenses and permits, and shall provide copies of all licenses and permits to the Commission prior to construction activity associated with the transmission facility that requires said license or permit.</p>	<p>Basin provided a table of possible permits/approvals to be obtained for the Project as a part of its Application, Docket Item No. 1.</p> <p>Basin obtained construction stormwater coverage from the ND DOH and a Conditional Use Permit from McKenzie County (Docket Item No. 49).                      Basin to provide copy of construction stormwater permit to the Commission for their records.</p>
5	<p>Company agrees to inform the Commission and the Commissioner's third-party construction inspector of its intent to start construction on the transmission facility prior to the commencement of construction. Once construction has started, Company shall keep the Commission and the Commissioner's third-party construction inspector updated on construction activities on a monthly basis.</p>	<p>Basin filed the preconstruction meeting minutes and notice of intent to start construction on May 8, 2015; Docket Item No. 53.</p> <p>Twenty-six progress reports have been docketed.</p>
6	<p>Company understands and agrees that the Certificate of Site Compatibility or Route Permit issued by the Commission is subject to suspension or revocation and may, in an appropriate case, be suspended or revoked for failure to comply with the Commission's order, the conditions of the certificate or subsequent modification, or failure to comply with the applicable statutes, rules, regulations, standards, and permits of other state or federal agencies.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>



Order Number	Order Provision	Status
7	Company agrees to maintain records that will demonstrate that it has complied with the requirements of the Commission's order and the Certificate of Corridor Compatibility or Route Permit, and that it will preserve the records for Commission inspection at any reasonable time upon reasonable notice.	Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.
8	Company agrees to construct and operate the transmission facility in the manner described in Company's application, in the late filed exhibits, and supplemental materials (Application). To the extent there are any conflicts or inconsistencies between the Company's Application and the provisions in this Certification Relating to Order Provisions, the Certification provisions control.	Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.
9	Company agrees to report promptly to the Commission the presence in the permit area of any critical habitat or threatened species, endangered species, bald eagles, or golden eagles of which Company becomes aware and which were not previously reported to the Commission.	Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.  No encounters occurred.
10	Company understands and agrees that all cultural resource mitigation plans must be submitted to the North Dakota State Historic Preservation Office and approved prior to the start of any fieldwork and construction activity in the affected area.	Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.



Order Number	Order Provision	Status
11	<p>Company understands and agrees that if any cultural resource, paleontological site, archeological site, historical site or grave site is discovered during construction, it must be marked, preserved and protected from further disturbances until a professional examination can be made and a report of such examination is filed with the Commission and the State Historical Society and clearance to proceed is given by the Commission.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p> <p>No encounters occurred.</p>
12	<p>Company understands and agrees that all buried facility crossings of graded roads must be bored unless the responsible governing agency specifically permits Company to open cut the road.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>
13	<p>Company understands and agrees that all pre-existing township and county roads and lanes used during construction must be repaired or restored to a condition that is equal to or better than the condition prior to the construction of the transmission facility and that will accommodate their previous use, and that areas used as temporary roads or working areas during construction must be restored to their original condition.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>
14	<p>Company understands and agrees that construction must be suspended when weather conditions are such that construction activities will cause irreparable damage to roads and land, unless adequate protection measures approved by the Commission are taken.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>



Order Number	Order Provision	Status
15	<p>Company understands and agrees that all topsoil, up to 12 inches, or topsoil to the depth of cultivation, whichever is greater, over and along trench areas where cuts will be made, must be stripped an segregated from the subsoil. Any area on which excavated subsoil will be placed must also be stripped of topsoil. After backfilling is completed, any excess subsoil must be placed over the excavation area, blending the grade into existing topography. Topsoil must be replaced over areas from which it was stripped only after the subsoil is replaced.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>
16	<p>Company understands and agrees that reclamation, fertilization and reseeding is to be done according to the Natural Resources Conservation Service recommendations, unless otherwise specified by the landowner and approved by the Commission.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>
17	<p>Company understands and agrees that its obligation for reclamation and maintenance of the right-of-way will continue throughout the life of the transmission facility.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>
18	<p>Company understands and agrees that its obligation for reclamation and maintenance of the transmission facility, associated facilities and roadways will continue throughout the life of the transmission facility.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>
20	<p>Company understands and agrees that it shall work with landowners and residents to mitigate any increase in television and residential radio interference that results from the construction of the transmission facility.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>

Final Inspection Report  
 Basin Electric Power Cooperative  
 North Killdeer Loop Phase I 345 kV Transmission  
 PU-14-813  
 August 12, 2017



Order Number	Order Provision	Status
21	Company understands and agrees that it shall repair or replace all fences and gates removed or damaged during all phases of construction and operation of the transmission facility.	Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.
22	Company understands and agrees that it shall repair or replace all drainage tile broken or damaged as a result of construction and operation of the transmission facility.	Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.
23	Company understands and agrees that staging areas or equipment shall not be located on land owned by a person other than Company unless otherwise negotiated with landowners.	Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.
24	Company understands and agrees that it shall remove all waste that is a product of construction and operation, restoration, and maintenance of the site, and properly dispose of it on a regular basis.	Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.  No debris or waste was observed during the final inspection.



Order Number	Order Provision	Status
25	<p>Company understands and agrees that it shall, as soon as practicable upon the completion of the construction of the transmission facility, restore the area affected by the activities, to as near as is practicable the condition as it existed prior to the beginning of construction.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p> <p>Restoration activities are largely complete, there is a small area of ROW by the Kummer Station where restoration needs to be addressed; Basin has plans to have this area addressed.</p>
26	<p>Company understands and agrees that it shall provide any necessary safety measures for traffic control or to restrict public access to the transmission facility.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>
27	<p>Company understands and agrees that it shall advise the Commission of any extraordinary events which take place at the site of the transmission facility, including injuries to any person, or the death of any threatened or endangered species on the site within five business days of such event.</p>	<p>Basin reported one safety incident, which occurred during construction of the Project, Docket Item No. 90.</p>
28	<p>Company understands and agrees that it shall advise the Commission of the discovery of a large number of dead birds or bats on the site within five business days of such event.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p> <p>No incidents occurred.</p>



Order Number	Order Provision	Status
29	<p>Company understands and agrees that, prior to beginning construction of the transmission facility at a location, it shall send a letter to each landowner with whom an easement was executed for that location specifying the name and phone number of the company representative responsible for receiving and handling landowner concerns for the life of all easements for the transmission facility.</p>	<p>Basin distributed letters to landowners identifying the appropriate contact for the company representative responsible for receiving and handling landowner concerns.</p>
30	<p>Company understands and agrees that it will file with the Commission the name and the phone number of the current company representative who is responsible for receiving and resolving landowner issues for the transmission facility. The company will update this information whenever there is a change to the current company representative for the life of all easements for the transmission facility.</p>	<p>Presented as a part of the pre-filed testimony of Mike Murray, Manager of Property and Right of Way, Docket Item No. 20.</p> <p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>
31	<p>Upon request, Company agrees to provide the Commission with engineering design drawings of the transmission facility prior to construction.</p>	<p>Presented as exhibits at the Public Hearing, Docket Item No. 39 identifies the list of documents entered into record.</p>



Order Number	Order Provision	Status
32	<p>Company understands and agrees that it shall inform the Commission in writing of plans to modify the transmission facility or of any plans to modify the site plan for the transmission facility. Company understands and agrees to obtain written approval from the Commission prior to any modifications to the site plan or the transmission facility. Approval may be granted after notice and opportunity for hearing.</p>	<p>Basin filed an Amendment to Application for Consolidated Certificate of Corridor Compatibility and Route Permit, Docket Item No. 56; the Amendment was approved by the Commission and Supplemental Orders were issued; Docket Item No. 68.</p> <p>Basin filed two structure relocation requests (Docket Item No. 75 and 76); both requests were approved by the Commission, Docket Item No. 77.</p>



Order Number	Order Provision	Status
33	<p>Company agrees to provide the Commission with both electronic and a paper copy of the corridor approved by the Commission and the facility design specifications for the construction of the transmission facility showing the location of the transmission facility as built, and will provide this information within 3 months of the completion of the construction. Company also agrees to provide an electronic version of the corridor approved by the Commission and the facility design specifications for the construction of the transmission facility showing the location of the transmission facility as built that can be imported into ESRI GIS Mapping software within 3 months of the completion of the construction. This electronic map data must be referenced to the North Dakota coordinate system of 1983, North and/or South zones US Survey feet (NAD 83) UTM Zone 13N or 14N feed (NAD 83), or geographic coordinate system (WGS 84) feet. The vertical data must be in the appropriate vertical datum for the coordinate system used. All submissions must specify the datum in which the data was developed.</p>	<p>Basin filed with the Commission the Project's final design specifications, structure locations and transmission route, Docket Item No. 99.</p>
34	<p>Company understands and agrees that the authorizations granted by any Certificate of Corridor Compatibility or Route Permit issued by the Commission for the transmission facility are subject to modification by order of the Commission if deemed necessary to protect further the public or the environment.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>



Order Number	Order Provision	Status
35	<p>Company understands and agrees that in the event Company desires to construct, within any corridor granted by a Certificate of Corridor Compatibility in this proceeding, a transmission facility or energy conversion facility that was not included in Company's application in this proceeding, Company shall apply to the Commission for a Route Permit or Site Certificate for the facility.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>
36	<p>Company shall notify the Commission, as soon as reasonably possible if any damage as defined by North Dakota Century Code Chapter 49-23, occurs to underground facilities during construction conducted under the certificate or permit issued in this proceeding. In the event of any damage to underground facilities, Company shall suspend construction in the vicinity of the damage until compliance with One-Call Excavation Notice System requirements under North Dakota Century Code Chapter 49-23 has been determined and clearance to proceed has been given by the Commission.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>
37	<p>Company understands and agrees that the corridor certificate and route permit are subject to suspension or revocation and may, after hearing, be suspended or revoked for failure to comply with the Commission's order, requirements of the One-Call Excavation Notice System under North Dakota Century Code Chapter 49-23, the conditions and criteria of the certificate or permit or subsequent modification, or failure to comply with applicable statutes, or rules, regulations, standards, and permits of other state or federal agencies.</p>	<p>Basin acknowledged and agreed to this Order by signing the Certification Relating to Order Provisions on September 30, 2015, Docket Item 45.</p>



**2.4 TREE AND SHRUB MITIGATION SPECIFICATIONS**

Specification	Status
Inventory trees and shrubs in accordance with specifications 1-6.	Basin completed a preconstruction tree and shrub inventory.
Clearing for construction was completed in accordance with specifications 7-9.	Basin followed the Commission's clearing requirements when removing trees/shrubs.
Inventory the trees and shrubs removed during construction.	An inventory of trees/shrubs removed during construction was maintained.
Mitigation plan prepared identifying the number, variety, type, location and date of replacement plantings filed with Commission for approval.	Basin is working with the McKenzie County NRCS for tree replacement. Basin is preparing the Project Tree/Shrub Mitigation Plan that will be filed with the Commission.
Annual inspection and reporting completed, if applicable.	NA-trees/shrubs have not been planted.



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**SECTION 3: CONCLUSIONS**

Based upon E3's inspections and interaction with Basin Electric staff the Project was constructed in accordance with the Commission's Orders. Basin Electric understands and has agreed to/has plans in place to file or address the following items:

1. Restoration repair along small segment or ROW by the Kummer Ridge Station.
2. Construction Stormwater Permit Documentation; and
3. Tree and Shrub Mitigation Plan and Annual Reports.



Photo 1: Patent Gate Station, area used for staging and laydown. No concerns.



Photo 2: Patent Gate Station, area used for staging and laydown. No concerns.



Photo 3: Patent Gate Station, area used for staging and laydown. No concerns.



Photo 4: Patent Gate Station, area used for staging and laydown. No concerns.



Photo 5: Looking east at structure 24, no concerns identified.



Photo 6: Looking southwest at structure 36, no concerns identified.



Photo 7: Looking east at structure 48, no concerns identified.

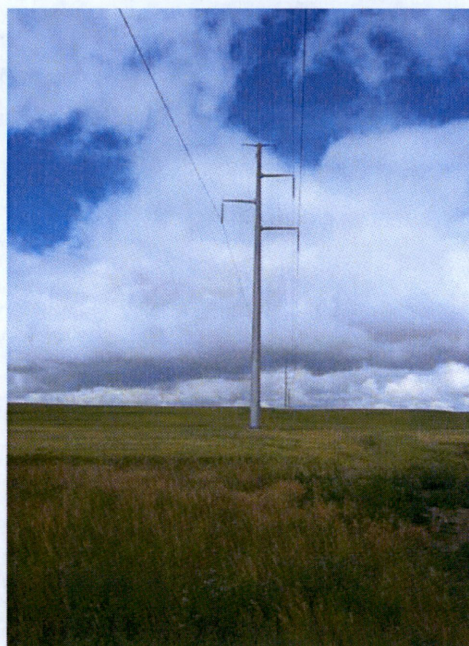


Photo 8: Looking west at structure 47, no concerns identified.



Photo 9: Looking west at structure 59.

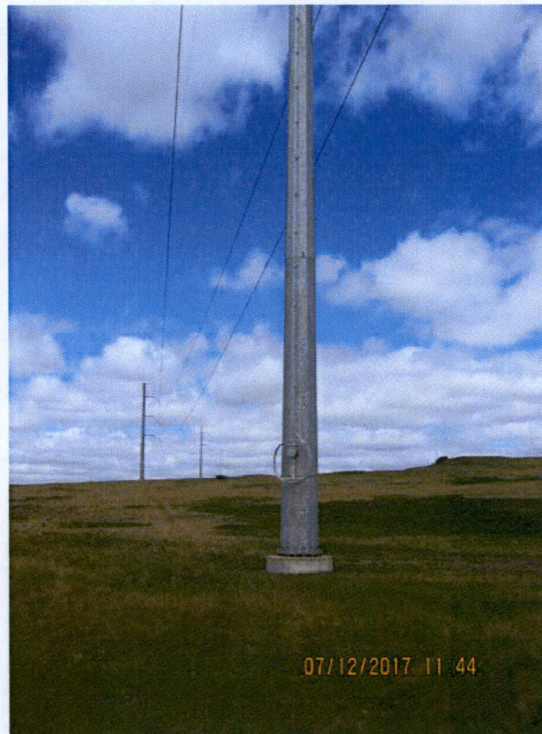


Photo 10: Looking north at structure 126.



Photo 11: Looking west at structure 154.



Photo 12: Kummer Station, no concerns identified.