



# **Grenora Pump Station Post-Construction Inspection Report PU-11-605**

Prepared for:

## **NORTH DAKOTA PUBLIC SERVICE COMMISSION**

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# 1.0 Executive Summary

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The North Dakota Public Service Commission (PSC) retained Wenck Associates, Inc. (Wenck) to complete a construction inspection of Grenora Pump Station upgrade and reconfiguration (Project) in Williams County, North Dakota (ND) owned and operated by Enbridge Pipelines North Dakota, LLC (Enbridge). Construction for the Project was completed in May 2013. Wenck reviewed all Project documents to identify those aspects that required compliance and visually inspected the Project area on 27 September 2012 and 17 October 2013.

The Project was well-maintained and appeared to have been constructed as planned with numerous efforts to minimize impacts. However, there were several non-critical issues that may need to be resolved for the Project to be considered complete and in full compliance, including 1) written verification of some items, in particular, record of the pre-construction conference 2) vegetation establishment in all seeded areas and crop production in agricultural land. Follow-up actions taken by Enbridge to address these issues can be corroborated in writing or photos and will not require a subsequent site visit. Wenck recommends the PSC take the following steps to resolve these issues.

## **Recommended Action Steps**

### **→ Review Internally, Clarify, Then Request if Needed**

- Several items may need written verification, but the PSC should review since some may not be needed or may be best verified in some other way (refer to list in Section 4.1).

### **→ Expect Later, Request if Needed**

- Documentation of satisfactory establishment of vegetation in grassland and other seeded areas and satisfactory crop production in the cropland. Soil amendments or re-seeding may be necessary if former land uses cannot be attained in the next couple years.

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## 2.0 Background & Scope

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### 2.1 INTRODUCTION

The Grenora Pump Station upgrade and reconfiguration (Project) is located in in the NE ¼ of Section 14, Township 159 North, Range 103 West, Williams County, North Dakota. The project includes the expansion of the Grenora Pump Station from 16,800 barrels per day (bpd) to 59,670 bpd, as well as the installation of a 40,000 barrel tank. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC), which issued its Findings of Fact, Conclusions of Law, and Order in Case No. PU-11-605 on 21 March 2012, granting a Certificate of Site Compatibility for Transmission Facility Corridor No. 129 and Route Permit No. 138 for the Project.

### 2.2 PURPOSE

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) authorizes the Public Service Commission to determine that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and the welfare of citizens of North Dakota. Post-construction inspections ensure that such projects are constructed in compliance with the siting laws (North Dakota Century Code Chapter 49-22) and rules (North Dakota Administrative Code Article 69-06) and the applicable Commission Findings of Fact, Conclusions of Law, and Order (Order). The North Dakota PSC retained Wenck Associates, Inc. (Wenck) to complete a construction inspection of the Project.

### 2.3 METHODS AND SCOPE OF INSPECTION

#### 2.3.1 Project Compliance Items Identified

Wenck identified a list of “Project Specifications”, which the company was obligated or responsible to follow and that can be verified either in written documentation or by an on-site inspection. These items were taken from 1) siting laws and rules, 2) Project activities or specifications proposed in the Application, 3) Project plans described in the Findings of Fact, 4) Orders, and 5) recommendations by other agencies. These Project specifications are listed in Table 2.1 within 7 categories: Siting & Location; Project Design & Engineering; Pre-Construction; Cultural Resources; Natural Resources; Construction, Reclamation & Soils; and Operation.

#### 2.3.2 Document Review

Wenck staff reviewed publicly-available Project documents in the PSC Online Case Search (ND PSC 2014) to find written verification of compliance for the Project specifications listed in Table 2.1. If written verification was filed, the findings are described in Section 3 and the source and name of the documentation is listed in Table 2.1, Column 3 (Written Verification). Shaded boxes in the table represent Project specifications that are potentially non-compliant because they have no written verification.

### **2.3.3 On-Site Inspection**

Luke Toso, Wenck botanist and natural resource scientist, visited the Project site on 27 September 2012 and 17 October 2013. Enbridge staff and third party engineers accompanied Wenck staff during the site visits, assisted with navigation and answered questions.

The site was inspected visually using a combination of driving and walking the Project area. Digital photographs (Canon Power Shot SD1300 IS, 12 megapixel) were taken showing typical Project infrastructure and documenting problem areas (Appendix A).

If on-site inspection of a Project specification was completed, the findings are described in Section 3 and referenced in Table 2.1, Column 4 (Site Verification). Shaded boxes in the table represent Project specifications that are potentially non-compliant based on site verification.

**Table 2-1: Project Specifications with Written or Site Verification Information**

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
<b>SITING &amp; LOCATION</b>			
Findings of Fact 2, 4,5; Order 1, 3, 4; Cert. App. p. 2, 3, 4; Route App. p. 2, 3, 4	Designated location in Williams County, ND. Project includes the expansion of the Grenora Pump Station from 16,800 bpd to 59,670 bpd, as well as the installation of a 40,000 barrel tank.	N/A	Section 3.1.1
ND Admin. Code Article 69-06-08; Findings of Fact 11, 12, 13; Order 1; Cert./Route App. p. 6, 7, 23, 24, 25, 30	Siting Criteria analysis – exclusion, avoidance, selection, policy. Avoidance areas: historical resources, woodlands, wetlands.	Docket #7, Application for certificate of corridor compatibility and route permit	Section 3.1.3
Findings of Fact 9; Cert. App p.23, 27	Total land disturbance about 152 acres. Approximately 18 acres of farmland will be permanently taken out of production.	None.	Section 3.1.4
<b>PROJECT DESIGN &amp; ENGINEERING</b>			
Findings of Fact 3; Order 1, 3, 4; Cert. App. p. 5, 6; Route App. p. 2	Authorized one new 40,000 barrel tank, two new receivers, new electrical shelter building, new 10-inch tank fill manifold, new 12-inch tank suction header, two new booster pumps, two new Coriolis mass meter assemblies, two new mainline pumps, new drag reducing agent skid, new pig launcher at station discharge, and new sump tank with sump pump in ND.	None	Section 3.2.1
Findings of Fact 20; Cert. App p. 6, 29; Route App. p. 3, 14-17	Design, construction, and operation in compliance with US DOT 49 CFR Parts 194 and 195.	None.	N/A
Order 33	As-built engineering design drawings and GIS files within 3mo.	Docket #100, As-built station plot plan	N/A
<b>PRE-CONSTRUCTION</b>			
ND Century Code Ch. 49-22-07.1; ND Admin. Code Article 69-06-03	Letter of intent.	Docket #1, Letter of Intent and map	N/A
ND Century Code Ch. 49-22-08; ND Admin. Code Article 69-06-04	Application for a certificate of site or corridor compatibility.	Docket #7, Application for certificate of corridor compatibility and route permit	N/A
ND Century Code Ch. 49-22-07	Certificate of site compatibility or route permit.	Docket #37, Certificate #130, Route Permit #139	N/A

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
ND Century Code Ch. 49-22-04; ND Admin. Code Article 69-06-02	Ten-year plan (submit before July 1).	Docket #7, Application for certificate of corridor compatibility and route permit, Exhibit I	N/A
Order 2, 5	Conduct pre-construction conference. Provide notice of intent to start construction.	Docket #26, Electronic record of formal hearing; Docket #41, Notice of intention to start construction	N/A
Order 32	Maps of approved corridor and associated GIS files submitted within 3 months of approved Order.	Docket #55, Map for Grenora Station Upgrade	
Order 31	Inform PSC of plans to modify facility and obtain approval.	None filed to date.	N/A
Order 3, 4; Cert. App. p. 10-14; Route App. p. 13, 17, 21	Obtain permits and approvals from other agencies and provide copies.	Docket #50, Permits, Stormwater Discharge and Air Pollution Control; Docket #82 Environmental Permits; Docket #56, Water Discharge Permit	N/A
Order 37; Findings of Fact 23	Participate in ND One-Call Excavation Notice System.	None.	Section 3.3.6
<b>CULTURAL RESOURCES</b>			
Findings of Fact 8; Order 12; Cert./Route App. p. 8	Obtain SHPO concurrence of archeologist's report. Provide copy to Commission.	Docket #2, #5, #6, ND SHPO Concurrence letters	N/A
Findings of Fact 9; Cert. App. p. 8, 24, 25; Route App. p. 8, 10	Avoidance of all identified sites potentially eligible for National Register of Historic Places. Submit cultural resource mitigation plans prior to construction. Avoidance of all cultural resource features during construction.	None.	Section 3.4.2
Order 13	Report discovery of cultural, archeological, historic sites. Construction stopped, SHPO consulted and clearance required, report to Commission filed.	None reported to date	N/A
<b>NATURAL RESOURCES</b>			
Route App. p. 9-12; Findings of Fact 16; USFWS (04-20-2011)	Expect temporary displacement of wildlife due to clearing and construction, but no significant impacts. No impacts expected to T+E or sensitive species. Project construction to occur outside migratory season for whooping cranes and outside the nesting season for bald and golden eagles and other migratory birds. Will comply with USFWS recommendations for minimizing wildlife impacts.	Docket #62 Raptor and Wildlife Survey, Tree and Shrub Inventory Report	Section 3.5.1
Route App. p. 2	Noxious weed (Canada thistle) avoided, equipment visually inspected prior to leaving area, and vegetation and soils cleaned from vehicles and	None.	Section 3.6.4

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
	equipment.		
Findings of Fact 19	Develop Environmental Mitigation Plan that has a Spill Prevention, Containment and Control Plan (SPCCP) in place to address project related spills.	Docket #7, Spill Prevention, Containment and Control Plan	Section 3.5.3
NDGF (11-7-2011); USFWS (11-17-2011)	Minimal disturbance of native prairie. Concerns of NDGF and USFWS.	None.	Section 3.5.2
Findings of Fact 17; Cert. App. p. 8-12, 28, 29, 33; NDGF (11-7-2011); USFWS (11-17-2011)	All wetlands and streams will be avoided by workspace modification, horizontal drilling, and/or use of best management practices (BMPs). NDGF, USFWS concern.	None	Section 3.5.3
Order 11; USFWS (11-17-2011)	Report presence of T+E species, bald or golden eagles during construction and operation.	None reported to date.	N/A
Order 18; USFWS (11-17-2011); NDPR (11/16/11)	Reclamation, fertilization, and reseeding according to NRCS (or landowner if approved). USFWS, NDPR request: reseed with native species.	None.	Section 3.5.5
Findings of Fact 18; Order 21	Compliance with "Tree and Shrub Mitigation Specifications".	Docket #79 Tree and Shrub Restoration Plan	Section 3.5.6
<b>CONSTRUCTION, RECLAMATION &amp; SOILS</b>			
Findings of Fact 22; Order 5, 9, 16	Environmental contractor retained for construction management. Construct and operate in accordance with Application and safety requirements. Construction suspended during adverse weather conditions. Provide weekly construction reports.	Docket #42-44, 47,48,51,52,54, 58-68, 71-78, 80, 81, 83-90, 95-99, Weekly Progress Reports	N/A
Order 6	Pipeline buried to 48in in range land, 48in in cultivated land, 48in at the bottom of ditch for road crossings, and 72in in undeveloped section lines. Application: 4ft typical depth of cover over pipeline.	None.	Section 3.6.1
Cert. App. p. 27; NDDH (3-7-2012); Route App. p. 18	Soil erosion minimized by use of BMPs during and after construction to protect groundwater and soils/topsoils. NDDH concerns: minimize fugitive dust, degradation of waterways, storm water management, and noise.	None.	Section 3.6.2
Order 17, 24; Cert. App. p. 27	Staging areas not located on cultivated land unless negotiated with landowners. Topsoil segregated and replaced.	None.	Section 3.6.5
Findings of Fact 23	Participation in the North Dakota One-Call Excavation Notice System.	None	Section 3.3.6
Order 15, 26	Temporarily disturbed areas will be restored. Pre-existing roads restored to satisfactory condition. Temporary roads removed and restored. Restoration of area as soon as practicable upon completion of construction.	None	Section 3.6.5

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
Order 22, 23, 25	Repair/replace all damaged fences and gates. Repair/replace damaged drainage tile. Waste removed & disposed regularly.	None	Section 3.6.6
Order 36	Damage to underground facilities reported to PSC.	None reported.	3.6.7
<b>OPERATION</b>			
Order 8, 9, 10, 28	Construct and operate in accordance with Application and safety requirements. Extraordinary events (e.g. injuries, T+E wildlife fatalities,) reported within 5 business days. Maintain records of compliance with Order and Certificate of Site Compatibility.	None reported to date.	Section 3.7.1
Order 20, 25; Cert. App. p. 21	Reclamation and maintenance throughout life of facility. Waste removed & disposed regularly.	None.	Section 3.7.2
Order 27, 29; Cert. App. p. 28, 29	Safety measures for traffic control or to restrict public access; pipeline marked at road and fence crossings. Procedure for handling complaints. Cooperation with landowners/residents to mitigate adverse effects.	Docket #57, Complaint and response procedures	Section 3.7.3

**\*Note: Shaded boxes represent non-compliance or potential non-compliance issues.**

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## 3.0 Findings

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### 3.1 SITING & LOCATION OF FACILITY

#### 3.1.1 Designated Location and Facilities

The Project was built as proposed in the designated project area described in the Application and Order (**Figure 1**). Maps of the approved corridor and observations of on the ground infrastructure during the inspection all appeared to coincide.

#### 3.1.2 Siting Issues

Siting criteria were analyzed in detail in the Application for the Project (Docket #7). Wenck confirmed during the site inspection that exclusion and avoidance areas were avoided to the extent possible as described in the Application. Historical/cultural resources were avoided (see Section 3.4.2). No natural woodlands or shelterbelts were impacted. All wetlands were protected with erosion control measures (Appendix A, Photos 6, 7, 10, 12, 14)

#### 3.1.3 Land & Agricultural Impacts

The Project was built as proposed within the estimated construction limits. It appeared that the extent of construction and disturbance were within the maximum acreages estimated in the Application and that topsoil replacement and soil compaction were satisfactory. Enbridge staff noted that any issues or landowner concerns related to agriculture or cropland are addressed promptly to maintain good rapport with the community.

### 3.2 PROJECT DESIGN & ENGINEERING

#### 3.2.1 Project Facilities

The Project was authorized to expand the Grenora Pump Station from 16,800 bpd to 59,670 bpd, as well as the installation of a 40,000 barrel tank, and other facilities as described in the Application and at the hearing (Docket #7, 26). Wenck observed project facilities during the on-site inspection, and they appeared to coincide with what was described in the Application and Order for the Project.

#### 3.2.2 Compliance with US DOT Regulations

There was no written verification or certification of compliance with US DOT 49 CFR Parts 194 and 195.

#### 3.2.3 As-built Drawings and GIS Files

As-built engineering design drawings and associated GIS files were received on 7 April 2014 (Docket #100).

### 3.3 PRE-CONSTRUCTION

#### 3.3.1 PSC-Required Documents

A letter of intent and map for the letter of intent was received on 2 September 2011 (Docket #1). The PSC moved that the one year waiting period between filing the letter of intent and the application be

shortened to three weeks (Docket #3, Commission Motion acknowledging Letter of Intent). An Application for a Certificate of Site Compatibility and Route Permit was subsequently submitted on 21 October 2011 (Docket #7, Application) and supplemented on 10 February 2012 (Docket #24, Application supplement). A Certificate of Site Compatibility No. 129 and Route Permit No. 138 was issued on 21 March 2012 (Docket #37). A ten year plan was on file in the Project docket (Docket #7 Exhibit I, 10 year plan).

### **3.3.2 Pre-Construction Conference/Notice of Intent to Start Construction**

An electronic record of the formal hearing was submitted on 23 February 2012 (Docket #26) and an email notice that construction had begun was provided (Docket #41, Notice of Intention to begin construction).

### **3.3.3 Maps of Approved Corridor**

Maps of the approved corridor and associated GIS files were received on 25 June 2012 (Docket # 55).

### **3.3.4 PSC Approval of Modifications**

There were no notifications to modify the facility filed to date. Observations of on-the-ground infrastructure coincided with maps of the approved corridor.

### **3.3.5 Permits and Approvals from Other Agencies**

Several state and local permits and approvals were identified in the Application as potentially required for the Project. There were no indications in the Application that federal permits would be required for the Project. Submitted state and local approvals included:

- ND Department of Health (NDDH) General Permit for Stormwater Discharges from Construction Activity (Docket #50, 82, Permits, Environmental Permits);
- ND Department of Health (NDDH) Air Pollution Control Permit to Construct (Docket #50, Permits);
- State of North Dakota Temporary Water Permit (Docket #56, 82, Permits, Environmental Permits)

### **3.3.6 North Dakota One-Call**

There was no written documentation that Enbridge participated in North Dakota One-Call. However, Enbridge staff confirmed the One-Call was initiated prior to construction activities.

## **3.4 CULTURAL RESOURCES**

### **3.4.1 SHPO Concurrence**

The ND State Historical Society (SHPO) concurrence of all archeology reports was provided to the PSC (Dockets #2, #5, #6, ND SHPO Concurrence letters).

### **3.4.2 Cultural Site Avoidance**

Enbridge staff confirmed that no cultural sites were disturbed during construction activities.

### **3.4.3 Reporting**

No new discoveries of cultural, archeological, or historic sites have been reported to the PSC to date. Enbridge staff confirmed that no new cultural resources were discovered during Project construction.

## **3.5 NATURAL RESOURCES**

### **3.5.1 Wildlife**

The US Fish and Wildlife Service (USFWS) requested that construction during the migratory nesting season be avoided. Weekly construction reports show that construction occurred during the spring nesting season (Feb 1-July 15), since it began 16 April 2012 (Docket #42) and ended 23 August 2013 (Docket #99). The USFWS suggested that if construction occurred during this season, the entire project area be mowed, grubbed or cleared to provide sufficient habitat manipulation to prevent migratory birds nesting in the area. However, all construction and work activities were planned to take place within the existing property boundaries of the Enbridge Grenora Station.

Additional measures were proposed to minimize impacts to other wildlife in the Project area and Wenck verified several of these measures. No above ground electrical lines were constructed for the Project. Wetland habitat impacts were minimized for the most part, and no disturbances were observed (See Section 3.5.3 for more details).

### **3.5.2 Native Prairie**

Most of the Project was located on an existing pump station pad and cultivated lands. No native prairie was impacted by Project construction.

### **3.5.3 Wetlands**

There were eight wetlands identified and delineated within the Project Area (Docket #7, Natural Resources Report). The Application stated that disturbance to wetlands would be minimized. All avoidance measures appear to have been followed as Wenck observed no disturbance to wetlands in the on-site inspection (Appendix A, Photos 6, 7, 10, 12, 14). The Environmental Mitigation Plan and Spill Prevention, Containment, and Control Plan (Docket #7) and numerous erosion control features (Appendix A, Photos 2, 4-14) further reduced impacts to wetlands.

### **3.5.4 Reporting**

Weekly construction reports indicated that no environmental incidents or issues occurred during construction (Docket #42, 43, 44, 47, 48, 51, 52, 54, 58-68, 71-78, 80,81, 83-90, 95-99, Weekly construction reports). There were no reports filed to date of the presence of threatened or endangered species or bald or golden eagles during construction or operation to date.

### **3.5.5 Reclamation & Reseeding**

Reclamation was still ongoing at the time of the site inspection, but soils had been recontoured, and reseeded had been completed, with vegetation beginning to establish in some areas (Appendix A, Photo 7). Vegetation was beginning to emerge in most of the reseeded areas, though it was not fully established. The timing of the inspection was too early in the revegetation process to identify the species composition of the emerging vegetation. Wenck recommends the PSC request documentation from Enbridge once vegetation has fully established in the grassland area.

### **3.5.6 Tree & Shrub Mitigation**

A Tree and Shrub Mitigation Plan was submitted for the project on 5 March 2013 (Docket #79). The report indicated no trees or shrubs would need to be replaced. Wenck observed that impacts to all shelterbelts and tree and shrub locations indicated in the Mitigation Plan were avoided. No trees or shrubs were removed for the Project and thus Tree and Shrub Mitigation would not be required.

## **3.6 CONSTRUCTION, RECLAMATION & SOILS**

### **3.6.1 Construction Management & Safety**

Weekly construction reports were submitted weekly for the duration of construction (Docket #42-44, 47, 48, 51, 52, 54, 58-68, 71-78, 80, 81, 83-90, 95-99, Weekly Progress Reports). Each report detailed Project site safety activities for the week, and indicated a weekly conference call was held to discuss various safety measures. These reports indicated that construction of the Project proceeded in accordance with the Application and safety requirements. The weekly construction reports didn't indicate that any adverse weather condition occurred during construction.

### **3.6.2 Erosion & Sedimentation**

The NDDH requested that the Project minimize fugitive dust, degradation of waterways, manage stormwater, and noise. Best Management Practices (BMPs) were used as part of the construction and maintenance of the Project to control erosion, sedimentation, and manage stormwater. Most erosion control devices were removed following completion of the Project. Nonetheless, several were still in place and were observed during the inspection (Appendix A, Photos 2, 4-14). There were no erosion problems observed during the inspection. Fugitive dust and noise were presumably controlled during construction activities.

### **3.6.3 Minimization of Impacts**

During the site visit it appeared that measures were taken to minimize the overall impact of the Project and the extent of land and soil disturbance. Areas that would have been disturbed during construction of the project were agricultural fields and pasturelands. No indication of crop stress was observed, but the Project was completed at the end of the growing season when crops had already been harvested. Pastures had been reseeded, but re-establishment of vegetation was still in progress. Wenck observed that all topsoil appeared to be replaced to the required depth.

### **3.6.4 Noxious Weeds**

A survey for noxious weeds was part of the natural resource survey prior to Project construction; no noxious weed populations were found (Docket #7, Wetland Delineation and Habitat Assessment Report). Mitigation measures were identified in the Application to prevent the spread of noxious weeds during construction. No documentation was available to verify these measures were taken. No noxious weed populations were observed incidentally during the site inspection.

### **3.6.5 Reclamation & Roads**

At the time of the site inspection, the soils had been recontoured, (Appendix A, Photos 2, 4, 6, 7, 8). Weekly reports indicated that cleanup and reclamation occurred concurrently with construction activities (Docket #51, 52, 54, 58, 60, 61, 95, 97, 98, Weekly Construction Reports). At the time of the inspection, reseeding had been completed, with erosion control in place (Appendix A, Photos 2, 4-14). Wenck recommends that the PSC request documentation from Enbridge when vegetation has fully established. No temporary roads had been used during construction. Enbridge paved 133<sup>rd</sup> Ave NW, the road leading up to the pump station and added a turning lane to accommodate truck traffic. All roads within the project area appeared to be in good condition and properly maintained.

### **3.6.6 Fencing, Repairs & Waste**

No fences were damaged during construction. Enbridge reported there had not been agricultural fields with drainage tile impacted by construction of the Project. There was no waste or debris observed at the site.

### **3.6.7 Damage to Underground Facilities**

No reports of damage to underground facilities were reported to the PSC. Wenck confirmed with Enbridge's representative that no damage to facilities occurred during construction.

## **3.7 OPERATION**

### **3.7.1 Safety & Record-keeping**

No concerns were identified during the field survey that would indicate that Project operation was out of compliance with the Application or safety regulations. Examples of operational safety measures observed at the site include: use of personal protective equipment, signs marking the pipeline routes, and warning signs around at block valves. No reports of extraordinary events were filed to date with the PSC.

### **3.7.2 Maintenance**

The Project is inspected several times a year to identify any potential issues or problem areas. There was no waste or debris observed during the inspection.

### **3.7.3 Public Contact & Safety**

There were safety signs and fencing around the construction site, restricting public access to the area (Appendix A, Photos 2, 3, 4, 5). A procedure for handling complaints was presumably in place based on discussions during the preconstruction meeting (Docket #26, Electronic record of formal hearing). The Enbridge representative indicated that resident concerns and issues are handed promptly and Enbridge makes every reasonable attempt to alleviate problems caused by the Project.

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## 4.0 Issues to Resolve and Recommendations

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### 4.1 PROJECT SPECIFICATIONS NEEDING WRITTEN VERIFICATION

Several components of the Project were asserted in the Application or proposed construction and could be verified in writing, but have not been filed with the PSC. Table 2-1 summarizes these items, which are indicated as those shaded in the “Written Verification” column, indicating no written verification was provided where applicable and necessary. Wenck does not consider any of these items to be critical for Project compliance. However some were more important than others and Wenck suggests they be on file with the PSC to confirm compliance and recommends the PSC request from Enbridge the following list of “Potential” items.

#### Potential Items

- Written verification of compliance with US DOT 49 CFR Parts 194 and 195.

### 4.2 REVEGETATION & CROP PRODUCTION

Establishment of vegetation was ongoing within the disturbed construction footprint along the berm surrounding the new pump station, and in the road ditches near the pump station. Wenck recommends the PSC request monitoring and documentation when reclamation is complete. Soil amendments or re-seeding may be necessary if vegetation does not readily reestablish.

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## 5.0 Conclusions

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Overall, the Project appeared to have been constructed as designed with minimal impacts to the surrounding natural or human environment. The Project site was well-maintained and in good condition. However, Wenck observed several issues that may need to be resolved before the Project is considered complete and in full compliance. This includes: documentation of satisfactory vegetation establishment in grassland and other seeded areas. None of these are critical issues, but the PSC should determine which are necessary for the company to comply with and then notify the company what actions are required on their part.

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## 6.0 References

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North Dakota Public Service Commission (ND PSC). 2014. Online Case Search. Available from:  
[http://www.psc.nd.gov/database/company\\_case\\_list.php](http://www.psc.nd.gov/database/company_case_list.php). Accessed May 2014.

Niswonger, Alan. 2013. Construction Coordinator, Enbridge Pipelines (North Dakota), LLC. Personal Communication: discussion during site visit.

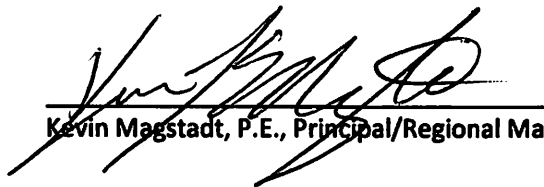
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## 7.0 Signatures

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The services performed by Wenck scientists for this project have been conducted in a manner consistent with the degree of care and technical skill appropriately exercised by professionals currently practicing in this area under similar time and budget constraints. Recommendations and findings contained in this report represent our professional judgment and are based upon available information and technically accepted practices at the present time and location. Other than this, no warranty is implied or expressed.

Project Manager, Kevin Magstadt and Luke Toso, Botanist/Natural Resources Specialist, prepared this report.

  
Kevin Magstadt, P.E., Principal/Regional Manager

5/22/2014  
Date

  
Luke Toso, Botanist/Natural Resource Scientist

5/22/2014  
Date

  
Luke Nelson, Junior Engineer

5/22/2014  
Date

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## **Appendix A**

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### **Photographs**



**Photo 1.** Direction: North. 40,000 Barrel Tank under construction during the September 2012 site visit.



**Photo 2.** Direction: East. New Tank after completion during the October field survey. Note the culvert and rip-rap used for water and erosion control.



**Photo 3.** Direction: West. Storage tank and the associated structures after completion.



**Photo 4.** Direction: Southeast. Fiber blanket and silt fence in place prevent erosion and sedimentation of waterways.



**Photo 5.** Direction: Northwest. Sediment fence placed near a wetland. Note culverts and rip-rap installed to promote natural drainage and prevent erosion.



**Photo 6.** Direction: Southwest. Silt fence and fiber blanket were in place to prevent sedimentation into the natural wetland area.



**Photo 7.** Direction: West/Southwest. Fiber blanket in place to prevent sedimentation of the wetland. The area has been reseeded and vegetation was just beginning to emerge from under the fiber blanket.



**Photo 8.** Direction: East. Fiber blanket placed in a ditch to control erosion and sediment migration along the northern edge of the project area.



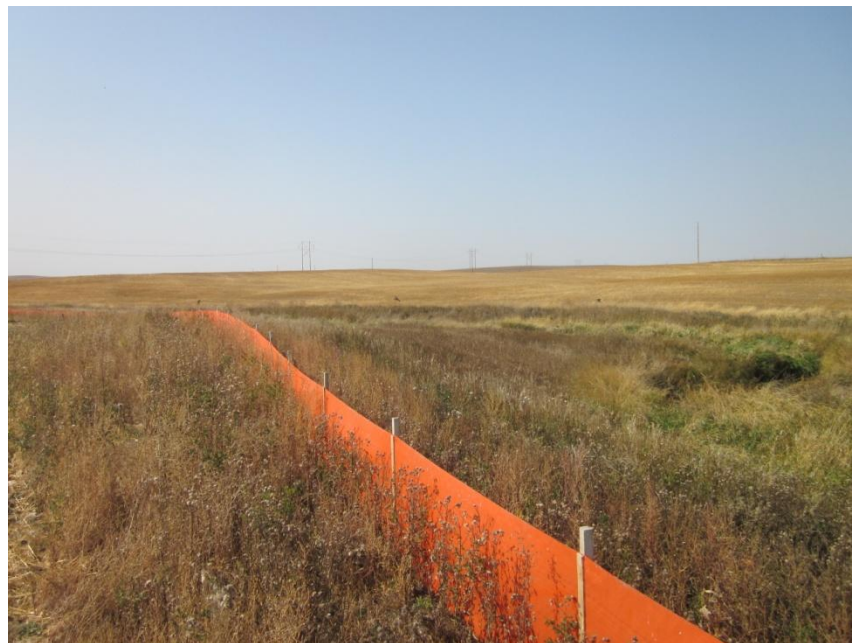
**Photo 9.** Direction: Northeast. Drain line surrounded by straw wattles to prevent sediment from entering the drainage.



**Photo 10.** Direction: West. Silt fences in place around a wetland installed to prevent sedimentation.



**Photo 11.** Direction: East. Silt fences and rip-rap around a drainage to protect the wetland for sedimentation.



**Photo 12.** Direction: Northwest. Silt fence installed on the north edge of the project area, preventing sediment from entering the drainage located to the north (pictured on the right edge of the photo).



**Photo 13.** Direction: East. Culvert surrounded by rip-rap and silt fences to prevent sedimentation.



**Photo 14.** Direction: West. Natural wetland basins surrounded by a silt fence to prevent sediment migration.

