WENCK File #B2579-0026
December 2015

Dore Crude Oil Loop Pipeline Project
Post-Construction Inspection Report
PU-14-840




Prepared for:

North Dakota Public Service Commission

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Responsive partner.
Exceptional outcomes.

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APPENDICES

1.0 Executive Summary

The North Dakota Public Service Commission (PSC) retained Wenck Associates, Inc. (Wenck) to complete a construction inspection of the Dore Crude Oil Loop Pipeline (Project) in McKenzie County, North Dakota (ND), constructed by Hiland Crude, Inc. (Hiland). Construction for the Project was completed in August 2015. Wenck reviewed all Project documents to identify those aspects that required compliance, and visually inspected the Project area on 7 July 2015.

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, documentation of associated GIS files 2) vegetation establishment thorughout the project. Follow-up actions taken by Hiland 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 throughout the project, as at the time of the inspection seeding had just been placed. Soil amendments or re-seeding may be necessary if former land uses cannot be attained in the next couple years.
- Associated GIS files

2.0 Background and Scope

2.1 INTRODUCTION

The Dore Crude Oil Loop Pipeline (Project) connects the Dore Junction to Hiland's Dore Terminal in McKenzie County, North Dakota. The Project was constructed by Kinder Morgan, Inc.; however, it is operated by Hiland Crude, LLC. The Project includes a 12-inch diameter underground pipeline with a total length of approximately 13 miles. 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-14-840 on 8 April 2015, granting a Certificate of Corridor Compatibility No. 163 and Route Permit No. 175 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 Hiland is 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 for a Certificate of Corridor Compatibility and Route Permit (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 under 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 2015) 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). Green-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 Nelson, Wenck project engineer, visited the Project site on 7 July 2015. A representative from Kinder Morgan, Stephen Smith, accompanied Wenck staff during the site visit.

The site was inspected visually by driving to access points and walking within the Project area at those points. Digital photographs (Canon Power Shot SD1300 IS, 12 megapixel) were taken showing typical Project infrastructure and documenting problem areas (**Appendix A**). Geographic coordinates were recorded at observation points or potential problem areas using a handheld Global Positioning System (GPS) (Garmin GPSMAP 60CSx; <10m accuracy; NAD83 datum) (**Appendix B**).

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). Green-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**
	SITING & LOCATION		
Corridor and Route App. p. 2; Findings of Fact 3	Located in McKenzie County, the project originates at the Dore Junction and terminates at Hiland's Dore Terminal near Dore, North Dakota.	None	*Section 3.1.1*
ND Admin. Code Article 69-06-08; Corridor and Route App. pp. 12-15; Findings of Fact 12, 13, 14	Siting Criteria analysis – exclusion, avoidance, selection, and policy. No exclusion or avoidance areas within study area. No impacts to Selection Criteria. Meets Policy Criteria.	Docket #1 Consolidated Application; Docket #2, Application Waiver	*Section 3.1.2*
Corridor and Route App. p. 18	Construction of the Dore Crude Oil Loop Pipeline will impact approximately 834 acres of land. About 2.5 acres are prime farmlands.	None	*Section 3.1.3*
Findings of Fact 15	Areas within 500ft of inhabited rural residence must be designated avoidance areas.	Docket #1, Tab 3; Docket #1, Tab 4 Project Maps	*Section 3.1.4*
ND State Land Dept. (04-06-11); NDGF (04-26-2011); NDPR (filed 10-24-2011)	No state trust surface or mineral ownership within study area. No PLOTS lands in or adjacent to corridor. No state parks or NDPR-managed lands.	Docket #1, Consolidated Application Tab 3	*Section 3.1.5*
	PROJECT DESIGN & ENGINEERING		
Corridor and Route App. 2; Findings of Fact 3, 4, 5	Authorized 13 miles of steel 12-inch diameter underground pipeline, pipeline markers, rectifiers, and block valves. Capacity of the system will be increased by 27,000 barrels per day with a maximum operating pressure of 1,440 pounds per square inch.	Docket #1, Consolidated Application Tab 3	*Section 3.2.1*
Corridor and Route App. p. 4	Temporary right of way (ROW) used during construction: 75ft construction ROW, with a 25ft temporary workspace used for streams, wetlands, and road crossings. Permanent ROW is 50ft wide.	Docket #1 Consolidated Application Tab 3	*Section 3.2.2*
Corridor and Route App. p. 5; Findings of	Design, construction, and operation in compliance with US DOT 49 CFR Part 195.	None	*N/A*

Source of Project Specification	Description of Project Specification	Written Verification*	*Site Verification**
Fact 24			
Certification 30	Provide engineering design drawings prior to construction upon request.	Docket #8, Supplemental information	*Section 3.2.4*
Certification 32	Provide electronic and paper as-built design specifications and associated GIS files within 3 months after construction complete.	Docket #52 Final As-built Alignment Sheets; No GIS	*N/A*
	PRE-CONSTRUCTION		
ND Century Code Ch. 49-22-07.1; ND Admin. Code Article 69-06-03	Letter of Intent.	Docket #2, Application Waiver	*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 and Route Permit.	Docket #1, Consolidated Application	*N/A*
ND Century Code Ch. 49-22-07	Certificate of Site Compatibility or Route Permit.	Docket #27, Findings of Fact, Conclusions of Law and Order	*N/A*
ND Century Code Ch. 49-22-04; ND Admin. Code Article 69-06-02	Ten-year Plan (submit before July 1).	None	*N/A*
Certification 2	Conduct Pre-construction Conference. Provide notice of intent to start construction.	Docket #28, Preconstruction Meeting Minutes; Docket #29 Notice of intent to start construction	*N/A*
Certification 31	Inform Commission of plans to modify facility and obtain approval. Any facilities not included in current Application must be applied for in a separate Route or Site Permit.	Docket #37, Certification and documentation for route adjustments under NDCC	*N/A*
Certification 3	Compliance with rules and regulations of other jurisdictional agencies. Obtain permits and approvals from other agencies and provide copies prior to applicable permitted activity.	Docket #4, Docket #23, Docket #1, Tab 3	*N/A*
Findings of Fact 25, Certification 35, 36	Participate in ND One-Call Excavation Notice System.	None recorded	*Section 3.3.5*

Source of Project Specification	Description of Project Specification	Written Verification*	*Site Verification**
	CULTURAL RESOURCES		
Corridor and Route App. pp. 6-10; Findings of Fact 8, 9, 10	Cultural resource sites determined ineligible for National Register of Historic Places. Complete Class III cultural resources survey of corridor. SHPO concurrence provided with Application. No avoidance or mitigation necessary.	Docket #4, Letter of Concurrence	*Section 3.4.1*
Findings of Fact 11; Certification 11, 12	Submit cultural resource mitigation plans to SHPO prior to construction for approval. Report discovery of cultural, archeological, historical, etc. sites and stop construction, consult SHPO for clearance, and file report to PSC.	Docket #4, Letter of Concurrence	*N/A*
	NATURAL RESOURCES		
Route App. pp. 10-13, 33-35; Findings of Fact 10, 18; 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 #1, Consolidated Application Tab 3; No USFWS and NDPR Letters of Correspondence	*Section 3.5.1*
Route App. p. 20; Findings of Fact 7, 17 ; USFWS (04-20-2011); NDGF (04-26-2011)	No permanent impacts to wetlands or waterbodies are anticipated. Spill control, erosion and sediment controls, and other specific construction measures will be used through wetlands, according to permit. USFWS recommends impacts to wetlands and streams be minimized by workspace modification, narrowing ROW, horizontal drilling, and/or use of Best Management Practices (BMPs). NDGF recommends erosion control, no drainage alteration.	Docket #23 Nationwide Permit No. 12 and Sovereign Land Permit	*Section 3.5.2*
Certification 10; USFWS (04-20-2011)	Report presence of T+E species, bald or golden eagles during construction and operation. USFWS: Project is within whooping crane migration corridor; stop work if one is sighted during construction and notify USFWS.	None reported to date	*N/A*

Source of Project Specification	Description of Project Specification	Written Verification*	*Site Verification**
Corridor and Route App. pp. 17, 34, 41; Certification 17; USFWS (04-20-2011)	Reclamation, fertilization, and reseeding according to NRCS (or landowner if approved). Mulch and erosion control fabric will be applied according to desires of landowner. USFWS request: reseed with grass/forb mixture of native species from local seed sources.	None	*Section 3.5.4*
Corridor and Route App. pp. 21, 41; Findings of Fact 21; Certification 20	Shrubland avoided to extent practicable. Tree and shrub removal and replacement will comply with "Tree and Shrub Mitigation Specifications."	Docket #21 Tree and Shrub Mitigation Report; Docket #50 Post-Construction Tree Removal Report	*Section 3.5.5*
	CONSTRUCTION, RECLAMATION & SOILS		
Route and Corridor App. pp. 5, 8; Certification 5, 15	Environmental monitors and inspectors utilized during construction. Construct and operate in accordance with Application and safety requirements. Construction suspended during adverse weather conditions. Provide weekly construction reports.	Docket #35, 36, 38-47, 49, Weekly Construction Reports	*N/A*
Certification 6	Pipeline buried to a minimum depth from the ground surface to the top of the pipe of 48 inches in range land, 48 inches for cultivated land, 48 inches at the bottom of the ditch for road crossings, and 72 inches across undeveloped section lines.	None	*Section 3.6.2*
Route and Corridor App. p. 33	Soil erosion minimized by use of BMPs during and after construction to protect surface water and soils/topsoils.	None	*Section 3.6.3*
Route and Corridor App. p. 33; Certification 16	Topsoil and subsoil must be segregated and replaced separately. No staging areas on land of other ownership. Rocks (> 3in diameter) will be removed from cultivated lands post-construction. Topsoil will be removed and replaced to maximum depth of 12 inches.	None	*Section 3.6.4*

Source of Project Specification	Description of Project Specification	Written Verification*	*Site Verification**
Route and Corridor App. pp. 18, 38; Certification 13, 14, 17, 25	Temporarily disturbed areas and roads will be restored. Pre-existing roads restored to satisfactory condition. Restoration of area to pre-construction contours as soon as practicable upon completion of construction. ROW will be de-compacted per landowner request. Reclamation and maintenance throughout life of facility. All crossings of graded roads will be bored.	None	*Section 3.6.5*
Corridor and Route App. pp. 18, 40; Certification 21, 22, 24	Temporary fences and gates will be installed as necessary. Repair/replace all damaged fences and gates. Repair/replace damaged drainage tile. Waste removed and disposed regularly. Disturbed areas are to be fenced in until seeding is completed.	None	*Section 3.6.6*
	OPERATION		
Certification 9, 27	Construct and operate in accordance with Application and safety requirements. Maintain records of compliance with Order and Certificate of Site Compatibility. Extraordinary events (e.g. injuries, T+E wildlife fatalities) reported within 5 business days.	None reported to date.	*Section 3.7.1*
Certification 18, 24	Reclamation and maintenance throughout life of facility. Waste removed & disposed regularly.	None	*Section 3.7.2*
Findings of Fact 26	Company's existing Emergency Action Plan will include the Project.	None	*Section 3.7.3*

***Note: Green-shaded boxes represent non-compliance or potential non-compliance issues.**

3.0 Findings

3.1 SITING & LOCATION OF FACILITY

3.1.1 Designated Location & Maps of Corridor

The Project was built as proposed in the designated location described in the Application and Order in McKenzie County, North Dakota. Hiland constructed the project entirely within the corridor previously approved for Hiland's Market Center Pipeline in Case Number PU-13-136. This was confirmed during Wenck's inspection.

3.1.2 Siting Criteria

Siting criteria were analyzed in detail in the Applications for the Project (Docket #1, Docket #2). Wenck confirmed during the site inspection that there were no exclusion or avoidance areas within the Project area. Wenck also confirmed that impacts to selection and policy criteria were considered and kept at a minimum.

3.1.3 Land & Agricultural Impacts

The Project was built as proposed within the estimated construction ROW, resulting in the conversion of 834 acres of land to industrial land use.

3.1.4 Setbacks

The Project was in a rural setting, six residences and/or farmhouses are within 500 feet of the pipeline. The residences do not encompass more than fifty percent of the width of the corridor in any location. Hiland stated waivers will be obtained for the Project (Docket #1, Consolidated Application Tab 3).

3.1.5 ND State-Owned or Managed Lands

Consultation with the ND Game & Fish Department (NDGF) indicated no NDGF-managed lands were within or adjacent to the pipeline corridor (Docket #1, Consolidated Application Tab 3). The ND Parks & Recreation Department (NDPR) indicated that no state parks or other lands they manage were in the vicinity of the Project (Docket #1, Consolidated Application Tab 3). Therefore, no state-owned or -managed lands were potentially impacted by the Project.

In a response dated 3 November 2014, the NDPRD indicated that the Project does not affect state park lands they manage or Land and Water Conservation Fund recreation projects they coordinate (Docket #27, Findings of Fact and Order).

The NDPRD was sent an overview of the Project and recommends that the Project be accomplished with minimal impacts and that all efforts be made to ensure that critical habitats are not disturbed (Docket #1, Consolidated Application Tab 3).

3.2 PROJECT DESIGN & ENGINEERING

3.2.1 Length & Infrastructure

The Project was authorized as 13 miles of 12in diameter underground pipeline, as described in the Application and at the notice of opportunity for hearing. It is also includes block valve, pipeline markers, and rectifiers. The site inspection observations coincide with these parameters (Docket #1, Consolidated Application Tab 3) (**Appendix A**, Photos 7, 8, 9, 15, 22, 25, 31).

3.2.2 Right-of-Way Corridor
The Order for the Project authorized construction within a 75ft ROW. The permanent ROW for the Project is 50ft wide. The pipeline appeared to have been constructed according to these maximum widths (Docket #1, Consolidated Application Tab 3) (**Appendix A**, Photos 23, 24, 26, 27).

3.2.3 Compliance with US DOT Regulations
There was no written verification or certification of compliance with US DOT 49 CFR Parts 192.

3.2.4 Engineering Design Drawings
Engineering design drawings were provided in the Application materials (Docket #8, Supplemental information).

3.2.5 As-built Drawings and GIS Files
As-built alignment drawings were submitted to the PSC (Docket #52 Final As-built Alignment Sheets). No associated CAD files (acceptable alternative to GIS) have been received. The PSC should pursue receipt of the CAD files and their accuracy should be confirmed.

3.3 PRE-CONSTRUCTION

3.3.1 PSC-Required Documents
An Application for Waiver of Procedures and Time Schedules was received on 16 December 2014 (Docket #2, Application Waiver). Hiland desired for the Commission to issue an order on the Consolidated Siting Application by virtue of its notice and opportunity for hearing procedure. On 11 February 2015 the PSC sent out a notice of filings and notice of opportunity for hearings (Docket #12, Notice of Filings).

A Certificate of Corridor Compatibility No. 163 and Route Permit No. 175 were issued on 8 April 2015, in accordance with the Order and Certification Relating to Order Provisions signed on 8 April 2015 (Docket #27, Findings of Fact, Conclusions of Law and Order).

A Ten-Year Plan was not filed.

3.3.2 Pre-Construction Conference/Notice of Intent to Start Construction
The Project conducted a pre-construction conference on 8 April 2015. Meeting minutes were taken, as well as well as a list of attendees (Docket #28, Preconstruction Meeting Minutes). Notice of intent to start construction was sent on 8 April 2015 (Docket #29, Notice of intent to start construction and landowner contact info).

3.3.3 PSC Approval of Modifications
On 28 April 2015 Hiland Crude, LLC filed a notification of project route adjustments (Docket #37, Certification and documentation for route adjustments under NDCC). The route adjustments are necessary under N.D.C.C. 49-22-16.3(1), which requires no action by the Commission. Route adjustments for the Project were all located inside the designated corridor in McKenzie County.

3.3.4 Permits and Approvals from Other Agencies

It was indicated in the Applications that consultation with federal, state, and local agencies would be required to obtain permits for the Project. Agencies consulted with and permits identified as required for the Project included:

- U.S. Fish and Wildlife Service (USFWS)
- North Dakota Game and Fish Department (NDGFD)
- North Dakota Parks and Recreation-Natural Heritage Program (NDPRD)
- North Dakota State Water Commission (NDSWC)
- North Dakota State Historical Preservation Office (SHPO)
- North Dakota Department of Health (NDDH)
- U.S. Army Corps of Engineers (USACE)
- McKenzie County Planning Department
- North Dakota Department of Trust Lands
- North Dakota Industrial Commission

These permits were filed with the PSC as required (Docket #4, SHPO Letter, Docket #23, Nationwide Permit No. 12 & Sovereign Land Permit). All consultations with the above-mentioned agencies and their approval have been documented with the PSC, not all agencies responded or commented back (Docket #1, Consolidated Application Tab 3).

3.3.5 North Dakota One-Call Participation

There was no written documentation that Hiland participated in North Dakota One-Call. Hiland does state that they participate in and support the North Dakota One-Call system in the Route Application (Docket #1, Consolidated Application Tab 3).

3.4 CULTURAL RESOURCES

3.4.1 Cultural Site Avoidance

No historic properties were affected by pipeline construction. The ND State Historic Preservation Office (SHPO) concurred with this conclusion (Docket #4, ND SHPO Concurrence Letter). Therefore, no mitigation plans were deemed necessary. No discoveries of cultural or historical materials were reported during construction.

3.5 NATURAL RESOURCES

3.5.1 Wildlife

The US Fish and Wildlife Service (USFWS) and Lake Ilo National Wildlife Refuge were sent an overview of the project, and no comments have been received (Docket #1, Consolidated Application Tab 3).

The North Dakota Parks and Recreation Department (NDPRD) was sent an overview of the Project and recommends that the Project be accomplished with minimal impacts and that all efforts be made to ensure that critical habitats are not disturbed (Docket #1, Consolidated Application Tab 3).

3.5.2 Wetlands

Wetland determinations were conducted by a desktop survey using aerial photo-based alignment sheets and USGS topographic maps identifying USACE waters of concern within North Dakota to identify wetlands along the Project route (Docket #1, Consolidated Application Tab 3). Wetlands, canals, streams and rivers were mapped and impacts to these water bodies were avoided to the extent practicable. During the inspection it was apparent that neither the wetlands nor the waterbodies had been impacted during construction.

3.5.3 Reporting
Weekly construction reports indicated that no environmental incidents or issues occurred during construction (Docket #35, 36, 38-47, 49, Weekly Construction Reports). There were no reports filed documenting the presence of threatened or endangered species or bald or golden eagles during construction or operation to date.

3.5.4 Reclamation & Reseeding
At the time of the site inspection, the pipeline trench had been backfilled, soils had been recontoured, and part of the reseeding had been completed in grassland areas (**Appendix A**, Photos 18-19) The majority of the project had just been seeded (**Appendix A**, Photos 23-32). There were still three areas of active construction at time of inspection (**Appendix A**, Photos 7, 22, 25). Wenck recommends the PSC request documentation from Hiland once vegetation has fully established in all reseeded areas of the project.

3.5.5 Tree & Shrub Mitigation
It appeared that, in general, major woody areas were avoided through Project siting (**Appendix A**, Photos 9-11, 15-17, 19). The Tree and Shrub Inventory report was not found in the documentation; however, a post-construction tree removal letter (Docket #50, #53) was found and stated that a preconstruction tree survey for the Project area determined that there was a low likelihood of removal for shrubs and trees greater than 1-inch diameter at breast height. The proposed route was located in a previously disturbed area, and in areas where trees did exist - such as the Yellowstone River crossing, the route was horizontally directionally drilled. The letter also stated that the post-construction review of the installed route showed that Hiland did not remove any trees or shrubs great than 1 inch in diameter. Therefore, no mitigation of trees and shrubs is needed (Docket #50, 53).

3.6 CONSTRUCTION, RECLAMATION & SOILS

3.6.1 Construction Management & Safety
Weekly construction reports were submitted for the duration of construction (Docket #35, 36, 38-47, 49, Weekly Construction Reports). Each report indicated whether any safety or environmental incidents had occurred and documented that construction of the Project proceeded in accordance with the Application and safety requirements. No major adverse weather occurred during construction, so no delay of construction was necessary (Docket #35, 36, 38-47, 49, Weekly Construction Reports).

3.6.2 Pipeline Depth
The pipeline must be buried to 48in in range land and 48in at the bottom of ditch for road crossings. The Route Application specifies minimum 4ft soil cover. Wenck did not visually confirm the depth of the pipeline, but Kinder Morgan's Environmental Inspector stated that the pipeline was buried to at least the specified depth and deeper where it bored under roads.

3.6.3 Erosion & Sedimentation
The Project Applications state BMPs would be used during and after construction to minimize soil erosion and protect surface water. During the site inspection it was apparent that BMPs had been used to minimize erosion and maintain drainage (**Appendix A**, Photos 6, 8, 10)

3.6.4 Soil Segregation & Staging
In general it appeared that measures were taken to minimize the overall impact of the Project and the extent of land and soil disturbance. Wenck observed that topsoil appeared

to be replaced or was in the process of being replaced, to the required depth and separately from subsoils. (**Appendix A**, Photos 1-5, 14-21, 23-32) It is recommended that the PSC follow up with Hiland or Kinder Morgan to ensure that all topsoil has been replaced where needed.

3.6.5 Reclamation & Roads

Weekly construction reports indicated that cleanup and reclamation had occurred concurrently with construction activities (Docket #35, 36, 38-47, 49, Weekly Construction Reports. At the time of the inspection, the pipeline trench had been backfilled, soils had been recontoured, and the majority of reseeding had just been completed (**Appendix A**, Photos 23-32). Wenck recommends that the PSC request documentation from Hiland or Kinder Morgan when vegetation has fully established. No temporary roads had been used during construction. All roads within the Project area that were bored under appeared to be in good condition and properly maintained.

3.6.6 Fencing, Repairs & Waste

There were no existing fences or gates that were impacted by pipeline construction; therefore, no replacement or repair was needed.

3.6.7 Underground Facilities

No reports of damage to underground facilities were reported to the PSC. Wenck confirmed with Kinder Morgan that no damage to facilities occurred during construction.

3.7 OPERATION

3.7.1 Safety & Record-keeping

No concerns were identified during the site review 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, and warning signs marking the pipeline route (**Appendix A**, Photos 27, 29, 31). No reports of extraordinary events were filed to date with the PSC.

3.7.2 Maintenance

Kinder Morgan indicated that the pipeline is regularly inspected and maintained. There were no waste, debris, or abandoned equipment observed during the inspection. The site appeared to be regularly maintained.

3.7.3 Public Contact & Safety

Warning signs marking the location of the pipeline had been installed and were in place at all fence lines and road crossings (**Appendix A**, Photos 19, 21, 27, 29, 31). Kinder Morgan indicated that resident/landowner concerns and issues are handled promptly and it makes every reasonable attempt to alleviate problems caused by the Project. The company representative responsible to receive and resolve landowner issues is Ryan Dahl.

4.0 Issues to Resolve and Recommendations

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 Wenck suggests they be on file with the PSC to confirm compliance and recommends the PSC request from Hiland the following list of "Necessary" items, and if the PSC deems appropriate, the list of "Potential" items could also be requested.

Necessary Items

- Provide associated GIS files

Potential Items

- Written documentation that Hiland participated in North Dakota One-Call
- Written documentation of Hiland's Ten-Year Plan
- Written documentation that Hiland's existing Emergency Action Plan will include the Project.

4.2 REVEGETATION & CROP PRODUCTION

When the post construction inspection of the project was conducted reseeding of the project had just been completed. Wenck recommends the PSC request monitoring and documentation to ensure the vegetation is established throughout the project.

5.0 Conclusions

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. There were a few minor issues that may need to be resolved before the Project is considered complete and in full compliance. This includes: documentation of satisfactory vegetation establishment throughout the Project, provide written verification of participation in North Dakota One-Call, provide written documentation that Hiland's existing Emergency Action Plan will include the Project, and provide associated GIS files for as-built design drawings. 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.

6.0 References

North Dakota Public Service Commission (ND PSC). 2015. Online Case Search. Available from: http://www.psc.nd.gov/database/company_case_list.php. Accessed July 2015-November 2015.

Smith, Stephen. 2015. Environmental Inspection. Personal Communication: discussion during site visit.

7.0 Signatures

The services performed by Wenck staff 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.

Lead Project Manager, Kevin Magstadt, and Secondary Project Manager, Luke Nelson, prepared the report.

_____ _____

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

_____ _____

Luke Nelson, Project Engineer Date

Photographs

Photo 1. Direction: Southeast. The inspection started at the Dore County Terminal, the pipeline heads north along Hwy 58 and then bends and heads to the west. Depicted here is the pipeline section that runs to the west.

Photo 2. Direction: Northeast. Wetland and canal were bored under to limit impacts. Wenck observed during the inspections that the wetland had not suffered any impacts. The pipeline continues to run to the northeast.

Photo 3. Direction: Northeast. Pipeline continues to run to the northeast through a second wetland. No impacts to the wetland were observed during the inspection.

Photo 4. Direction: Northeast. The pipeline continues to run to the northeast through an agricultural area. Impacts were limited to the route corridor. The impacted areas were restored to preconstruction conditions.

Photo 5. Direction: Northeast. Northeast side of bore of wetland, there were no impacts to the wetland and none were apparent during inspection. This area will be restored to preconstruction conditions. Standing water will also be remedied by the time construction is completed. Standing water is a result of farmland irrigation channels.

Photo 6. Direction: Northeast. The pipeline crosses the road via a bore underneath it. The pipeline then bends to the east after crossing the road and runs parallel to it in the ROW. After this point there are no more major road crossings or wetlands, several irrigation channels are bored under during the run alongside this road.

Photo 7. Direction: Northwest. One of several currently active construction sites that will be completed in the near future. Pipeline continues to run east along the ROW.

Photo 8. Direction: Northeast. Pictured above is one of the irrigation canals that were bored under. No impacts were apparent during the inspection.

Photo 9. Direction: East. This is the entry point for the bore underneath the Yellowstone River.

Photo 10. Direction: West. This is the exit point for the bore underneath the Yellowstone River. At the time of the inspection the topsoil was being put back in place. Standing water is a result of irrigation from surrounding farmlands. Area will be completely mitigated by the end of construction.

Photo 11. Direction: North. After the bore underneath the river the pipeline continues to the east.

Photo 12. Direction: East. The pipeline continues to the east and a bore was completed through the hill pictured above.

Photo 13. Direction: West. This is the approximate exit point of the bore through the hill. The pipeline then continues to the east following the existing ground contours.

Photo 14. Direction: East. Depicted above is the pipeline corridor done the side of the hill previously mentioned. The corridor still needs to be seeded to fully complete remediation.

Photo 15. Direction: Northeast. Pictured above is one of several block valves, at this point the pipeline bends to the north. This area also still needs to be seeded.

Photo 16. Direction: Southwest. After its short run to the north the pipeline bends continues running to the east. It was apparent that the route corridor widths described in the application were used throughout the project as depicted in the picture above.

Photo 17. Direction: Southeast. Shown above is the one cultural resource site located near the project. The site was not affected in any adverse way during construction and this was observed to be the case during the inspection.

Photo 18. Direction: East. This section of the pipeline ROW runs east and west and has recently been seed as depicted above. A follow up by the PSC with Kinder Morgan is needed to ensure full reclamation.

Photo 19. Direction: East. This section of the pipeline ROW runs east and west before bending to the southeast and has recently been seed as depicted above. A follow up by the PSC with Kinder Morgan is needed to ensure full reclamation.

Photo 20. Direction: Southeast. The pipeline corridor continues to run to the southeast towards 36 St NW. This is another area that had been recently seeded.

Photo 21. Direction: South. This is the bore location underneath 36th St NW. No permanent impacts to the road were observed during the inspection. Above ground pipeline markers are also depicted in this photo.

Photo 22. Direction: Southwest. After crossing 36th St NW the pipeline bends back to the east and runs parallel to the road on the south side. Pictured above is another active construction site at a block valve at the time of the inspection.

Photo 23. Direction: Southeast. The pipeline crosses 36th St NW and runs north of the road for a short while before crossing again and continuing parallel and south of the road. This portion of the corridor still needs to be seeded and monitored until fully reclaimed.

Photo 24. Direction: East. This portion of the corridor still needs to be seeded and monitored until fully reclaimed. It was apparent that the route corridor widths described in the application were used throughout the project as depicted in the picture above.

Photo 25. Direction: South. This is a third active construction site at the time of the inspection. It is likely that construction has been completed since the inspection and it is recommended that the PSC follow up with Kinder Morgan.

Photo 26. Direction: East. This portion of the corridor was recently seeded and needs to be monitored until fully reclaimed. It was apparent that the route corridor widths described in the application were used throughout the project as depicted in the picture above.

Photo 27. Direction: East. This is the section of the pipeline corridor that runs east and west parallel to 36th St NW. The ROW along the road has not been completely reclaimed. Shown here is an access road crossing that was completed by boring underneath the road. Also shown is an above ground pipeline marker.

Photo 28. Direction: East. This portion of the corridor was recently seeded and needs to be monitored until fully reclaimed. It was apparent that the route corridor widths described in the application were used throughout the project as depicted in the picture above.

Photo 29. Direction: East. This is the section of the pipeline corridor that runs east and west parallel to 36th St NW. The ROW along the road has not been completely reclaimed. Shown here is an access road crossing that was completed by boring underneath the road. Also shown is an above ground pipeline marker.

Photo 30. Direction: East. This portion of the corridor was recently seeded and needs to be monitored until fully reclaimed. It was apparent that the route corridor widths described in the application were used throughout the project as depicted in the picture above.

Photo 31. Direction: East. This is the section of the pipeline corridor that runs east and west parallel to 36th St NW. The ROW along the road has not been completely reclaimed. Shown here is an access road crossing that was completed by boring underneath the road. Also shown are above ground pipeline markers.

Photo 32. Direction: East. This portion of the corridor was recently seeded and needs to be monitored until fully reclaimed. It was apparent that the route corridor widths described in the application were used throughout the project as depicted in the picture above.

Photo 33. Direction: East. Another section of the pipeline corridor running east and west that has been recently seeded and should continue to be monitored until fully reclaimed.

Photo 34. Direction: East. The pipeline corridor continues to run east to west through farmlands. The area has been seeded and will be returned to preconstruction conditions.

Photo 35. Direction: East. Depicted above is the end of the pipeline route which comes to a conclusion at the Dore Junction.

Field Observation Points

NORTH DAKOTA PUBLIC SERVICE COMMISSION

Field Observation Map

WENCK ASSOCIATES

Responsive partner. Exceptional outcomes.

DEC 2015

Figure 1

Responsive partner.
Exceptional outcomes.

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