



Stateline NGL Pipeline Post-Construction Inspection Report PU-11-683

Prepared for:

NORTH DAKOTA PUBLIC SERVICE COMMISSION

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Table of Contents

1.0	EXECUTIVE SUMMARY	1-1
2.0	BACKGROUND & SCOPE	2-1
2.1	Introduction	2-1
2.2	Purpose	2-1
2.3	Methods and Scope of Inspection	2-1
2.3.1	Project Compliance Items Identified	2-1
2.3.2	Document Review	2-1
2.3.3	On-Site Inspection	2-2
3.0	FINDINGS	3-1
3.1	Siting & Location of Facility.....	3-1
3.1.1	Designated Location and Facilities	3-1
3.1.2	Siting Issues	3-1
3.1.3	Land & Agricultural Impacts	3-1
3.1.4	Setbacks	3-1
3.1.5	ND Department of Trust Lands	3-1
3.2	Project Design & Engineering	3-2
3.2.1	Length.....	3-2
3.2.2	Right-of-Way Corridor	3-2
3.2.3	Compliance with US DOT Regulations.....	3-2
3.2.4	As-built Drawings and GIS Files	3-2
3.3	Pre-Construction	3-2
3.3.1	PSC-Required Documents	3-2
3.3.2	Pre-Construction Conference/Notice of Intent to Start Construction	3-3
3.3.3	Maps of Approved Corridor	3-3
3.3.4	PSC Approval of Modifications.....	3-3
3.3.5	Permits and Approvals from Other Agencies.....	3-3
3.3.6	North Dakota One-Call	3-4
3.4	Cultural Resources	3-4
3.4.1	SHPO Concurrence	3-4
3.4.2	Cultural Site Avoidance	3-4
3.4.3	Reporting.....	3-4
3.5	Natural Resources.....	3-4
3.5.1	Wildlife	3-4
3.5.2	Native Prairie.....	3-5
3.5.3	Wetlands	3-5
3.5.4	Reporting.....	3-5
3.5.5	Reclamation & Reseeding	3-5
3.5.6	Tree & Shrub Mitigation.....	3-5
3.6	Construction, Reclamation & Soils.....	3-6
3.6.1	Construction Management & Safety.....	3-6

Table of Contents (Cont.)

3.6.2	Pipeline Depth	3-6
3.6.3	Erosion & Sedimentation	3-6
3.6.4	Minimization of Impacts	3-6
3.6.5	Graded Roads Bored	3-6
3.6.6	Noxious Weeds.....	3-7
3.6.7	Reclamation & Roads	3-7
3.6.8	Repairs & Waste.....	3-7
3.6.9	Damage to Underground Facilities.....	3-7
3.7	Operation.....	3-7
3.7.1	Safety & Record-keeping.....	3-7
3.7.2	Maintenance	3-7
3.7.3	Public Contact & Safety.....	3-8
4.0	ISSUES TO RESOLVE AND RECOMMENDATIONS.....	4-1
4.1	Project Specifications Needing Written Verification	4-1
4.2	Final Reclamation and Reseeding Methods.....	4-1
4.3	Wetland Disturbances.....	4-1
4.4	Noxious Weed Management	4-1
4.5	Protection Measures Around Block Valves.....	4-2
5.0	CONCLUSIONS	5-1
6.0	REFERENCES	6-1
7.0	SIGNATURES.....	7-1

TABLES

Table 2-1: Project Specifications with Written or Site Verification Information	2-3
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FIGURES

Figure 1: Project Area and Field Observations Map

APPENDICES

Appendix A: Photographs
Appendix B: Field Observation Points

1.0 Executive Summary

The North Dakota Public Service Commission (PSC) retained Wenck Associates, Inc. (Wenck) to complete a construction inspection of the Stateline Natural Gas Liquids (NGL) Pipeline (Project) in Williams County, North Dakota (ND) owned and operated by ONEOK Rockies Midstream, L.L.C (ONEOK). Construction for the Project was completed in September 2012. Wenck reviewed all Project documents to identify those aspects that required compliance and visually inspected the Project area on 27 September 2012.

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, 2) verification that fencing and warning signs were installed around block valves, 3) permits or mitigation measures used to minimize disturbance to wetland areas, 4) documentation of noxious weed management procedures, and 5) verification of final reclamation. Wenck expects follow-up actions taken by ONEOK to address these particular 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

→ Request Now

- Verification that fencing and warning signs have been installed around two block valves.
- Documentation that wetland disturbances were permitted, or mitigation measures used during construction to minimize disturbance to these areas.
- Documentation of noxious weed management procedures used during construction.

→ Review Internally, Clarify, Then Request if Needed

- Several “potential” items may need written verification, but the PSC should review first since some of them may not be needed or may be best verified in some other way (refer to list in Section 4.1).
- Documentation that the noxious weed Canada thistle did not spread post-construction.

→ Expect Later, Request if Needed

- Documentation of final reclamation and establishment of vegetation.

2.0 Background & Scope

2.1 INTRODUCTION

The Stateline Natural Gas Liquids (NGL) Pipeline (Project) was completed in 2012 in Williams County, North Dakota (ND), beginning approximately 6 miles north from the intersection of US Highway 2 and ND Highway 5 (**Figure 1**). The Project is operated by ONEOK Rockies Midstream, L.L.C. (ONEOK). The Project is a 10.75-inch diameter pipeline with a total length of 13 miles in North Dakota (totaling 53 miles including Montana). 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-11-683 on 11 April 2012, granting a Certificate of Site Compatibility for Transmission Facility Corridor No. 131 and Route Permit No. 140 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 2013) 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. Greg Underwood, third party Environmental Compliance Specialist for the Project, accompanied Wenck staff during the site visit and assisted with navigation, pointed out problem areas, 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**). 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) (**Figure 1; 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). 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			
Findings of Fact 4, 5, 23; Order 2, 3; App. p. 3, 4	Designated location in Williams County, ND. Project includes 13 miles of 10.75-inch pipeline and associated facilities: three block valves, a SCADA system and a single pumping station locating at the processing plants.	N/A	Section 3.1.1
ND Admin. Code Article 69-06-08; Findings of Fact 8, App. p. 6, 10, 11, 12	Siting Criteria analysis – exclusion, avoidance, selection, policy. Avoidance areas: historical resources, woodlands, wetlands.	Docket #6-19, Application; Docket #11 Application supplement.	Section 3.1.3
Findings of Fact 18; App p. 17	Total land disturbance about 388 acres. Project will impact approx. 105 acres of agricultural production. No impacts to quality of cropland anticipated, but would provide settlements to landowners for crop loss resulting from Project construction.	None.	Section 3.1.4
App. p. 13	Setback of 500 feet from an occupied building.	None.	Section 3.1.5
App. 17; Mineral Management Division (11-2-11); Surface Management Division (10-14-11)	ND Department of Trust Lands, Surface Management Division: Avoid ND School trust tract 36-154-104 and existing and potential well sites located along the south end of section 36; site the Project along the north section line of section 36. Mineral Management Division: Avoid ND State Mineral Tracts in 6-154-103, and NE¼ of 7-154-103 NE4 and SE ¼ 28-155-103.	Docket #65, As-built alignment sheets	Section 3.1.6
PROJECT DESIGN & ENGINEERING			
Findings of Fact 4; Order 3; App. p. 3, 4	Authorized 13 miles of 10.75-inch pipeline in ND.	Docket #65, As-built alignment sheets	Section 3.2.1
Findings of Fact 22; Order 2, 3	Pipeline would be located within a 250ft right-of-way (ROW), with permanent ROW of 50ft.	N/A	Section 3.2.2
Findings of Fact 24; App p. 3	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 6mo.	Docket #65, As-built alignment sheets	N/A
PRE-CONSTRUCTION			
ND Century Code Ch. 49-22-07.1; ND Admin. Code Article 69-06-03	Letter of intent.	Docket #1, Letter of Intent; Docket #3, Map for letter of intent	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 #6-19, Application; Docket #11 Application supplement.	N/A

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
ND Century Code Ch. 49-22-07	Certificate of site compatibility or route permit.	Docket #33, Certificate #131, Route Permit #140	N/A
ND Century Code Ch. 49-22-04; ND Admin. Code Article 69-06-02	Ten-year plan (submit before July 1).	Docket #6-2, 2011 10 year plan; Case No. PU-12-673, 2012 10 Year Plan	N/A
Order 2, 5	Conduct pre-construction conference. Provide notice of intent to start construction.	Docket #38, Preconstruction meeting discussions; Docket #40, ONEOK Construction start notice	N/A
Order 32	Maps of approved corridor and associated GIS files submitted within 3 months of approved Order.	Docket #56, Maps of Approved Corridor	
Order 30	Inform PSC of plans to modify facility and obtain approval.	None filed to date.	N/A
Order 3, 4; App. p. 15	Obtain permits and approvals from other agencies and provide copies.	Docket #24 NDDH SWPP permit; Docket #39, Permits and State of North Dakota easements; Docket #43 Hardscrabble and Hebron Township Road Crossing Permits.	N/A
Order 37	Participate in ND One-Call Excavation Notice System.	None.	Section 3.3.6
CULTURAL RESOURCES			
Findings of Fact 12; Order 12; App. p. 8, 16	Obtain SHPO concurrence of archeologist's report. Provide copy to Commission.	Docket #5, #30, ND SHPO Concurrence letters	N/A
Findings of Fact 12; App. p. 24-28	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. Docket #6-25 Unanticipated Discovery Plan for Cultural Resources	N/A
NATURAL RESOURCES			
App. p. 17, 23; USFWS (11-17-2011); Findings of Fact 14	Concerns of USFWS regarding wildlife resources addressed: T+E species, critical habitat protection, and migratory bird habitat manipulation by blading the construction corridor. The Findings of Fact noted that ONEOK would mow the entire ROW to manipulate nesting habitat.	Docket #6-28, USFWS response; Docket #42, 45-48 Weekly Construction Reports indicating mowing the ROW	Section 3.5.2
App. p. 17; NDGF (11-7-2011); USFWS (11-17-2011)	Minimal disturbance of native prairie. Concerns of NDGF and USFWS.	None.	Section 3.5.3

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
Findings of Fact 17; App. p. 6, 17, 30; 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.	Docket #54, 55 indicate horizontal drilling activities.	Section 3.5.4
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 3.5.6
Order 21; App. p. 23	Compliance with "Tree and Shrub Mitigation Specifications".	Docket #62, Tree and Shrub Mitigation Plan	Section 3.5.7
CONSTRUCTION, RECLAMATION & SOILS			
Findings of Fact 26; App. p. 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, 45-55, 57-61 Weekly Construction Reports. Docket #42, 46- 48, 50, 53, 54, Weekly Construction reports indicating work stoppage due to rain and/or mud.	N/A
Order 6; App. p. 30	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 3.6.2
App. p. 30; NDDH (3-7-2012)	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 3.6.3
Order 17, 24; App. p. 29	Staging areas not located on cultivated land unless negotiated with landowners. Topsoil segregated and replaced.	None.	Section 3.6.4
Order 14	Crossings of graded roads bored.	Docket #54, 55 indicating horizontal drilling activities	Section 3.6.5
App. p. 6, 28	Noxious weed (Canada thistle) avoided, equipment visually inspected prior to leaving area, and vegetation and soils cleaned from vehicles and equipment.	None.	Section 3.6.6
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.	Docket #61 Weekly Construction Report describing restoration activities	Section 3.6.7

Source of Project Specification	Description of Project Specification	Written Verification*	Site Verification*
Order 22, 23, 25; App. p. 28	Repair/replace all damaged fences and gates. Repair/replace damaged drainage tile. Waste removed & disposed regularly.	Docket #61 Weekly Construction Report indicating fence repair.	Section 3.6.8
Order 36	Damage to underground facilities reported to PSC.	None reported.	N/A
	OPERATION		
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; App. p. 28	Reclamation and maintenance throughout life of facility. Waste removed & disposed regularly.	None.	Section 3.7.2
Order 27, 29; App. p. 32, 35	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 #38, Preconstruction meeting discussions discuss procedures for handling complaints.	Section 3.7.3

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

3.0 Findings

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, as-built drawings, and observations of on the ground infrastructure during the inspection all appeared to coincide. Associated facilities observed were the three block valves in ND. The SCADA system and pump station were not observed because of ongoing construction at the processing plant, but a cathodic protection system was observed along the Project corridor (**Appendix A, Photo 7, 8, 12, 16**).

3.1.2 Siting Issues

Siting criteria were analyzed in detail in the Application for the Project (Docket #6-19). 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. Some disturbance to wetland areas was noted, but most wetlands were avoided by boring (**Appendix A, Photo 13**; See section 3.54 for further details). 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 limits and right-of-ways. It appeared that the extent of construction and disturbance were within the maximum acreages estimated in the Application. Timing of the inspection did not allow for confirmation that crop production had not been reduced within the pipeline Right-of-Way (ROW). However, it appeared that topsoil replacement and soil compaction were satisfactory (**Appendix A, Photos 3, 4, 5, 8, 9, 10, 12, 14, 15, 16**). The Environmental Compliance inspector noted that any issues or landowner concerns related to agriculture or cropland are addressed promptly to maintain good rapport with the community.

3.1.4 Setbacks

The Project was located in a rural setting, with no visible occupied dwellings along the pipeline route, complying with the 500ft setback specified in the Application.

3.1.5 ND Department of Trust Lands

Initial consultation with the ND Department of Trust Lands, Surface Management Division indicated that a school trust tract was located within the Project corridor in Section 36 Township (T) 154 North (N) Range (R) 104 West (W) (Docket #6-11, ND State Lands School Trust Response, dated 10-14-11). The Surface Management division indicated that the Project could route along the northern section line. It appears this suggestion was followed; an easement was on file for construction along the northern boundary of Section 36 (Docket #39 Permits and State of North Dakota Easements). Wenck confirmed that the pipeline was located within said easement.

The Mineral Management Division indicated that ND State mineral tracts were located in the W ½ of the SW ¼ of Section 6, the NE ¼ of Section 7, T154N R103W and the SE ¼ of Section 28, T155N R103W (Docket 6-14, 13, ND State Mineral Trust Response and map). They indicated that the Project should avoid these tracts. It appeared that construction avoided most of the tracts, but the Project went through the center of the NE ¼ of Section 7 T154N R103W. However, the State only owns mineral rights in this area and would not have jurisdiction over the Project's surface disturbances. The surface owner presumably allowed the Project through the tract. It appears that ONEOK made reasonable attempts to comply with these recommendations.

3.2 PROJECT DESIGN & ENGINEERING

3.2.1 Length

The Project was authorized to build 13 miles of 10.75-inch diameter pipeline in ND, as described in the Application and at the hearing. As-builts show that the pipeline entered Montana at approximately 69,660ft, or 13.19 miles (Docket #65, As-built alignment sheets). Although the pipeline is technically over 13 miles, Wenck considers this to be reasonable within the scope of the Project authorization and the Order. Wenck observed the pipeline route during the site inspection (**Figure 1; Appendix A**).

3.2.2 Right-of-Way Corridor

The Order for the project authorized construction within a 250ft ROW centered on the pipeline route. Wenck observed that the pipeline appeared to have been constructed within the ROW, and in many areas appeared to have been constructed within a smaller width of disturbance (especially along shelterbelts) (**Appendix A, Photo 9**).

3.2.3 Compliance with US DOT Regulations

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

3.2.4 As-built Drawings and GIS Files

As-built engineering design drawings and associated GIS files were submitted on 10 December 2012 (Docket #65), two months after construction was completed. The as-built drawings were inspected in relation to the on-the-ground infrastructure of the facility and appeared to coincide.

3.3 PRE-CONSTRUCTION

3.3.1 PSC-Required Documents

A letter of intent was received on 21 October 2011 (Docket #1), and a map for the letter of intent on 21 November 2011 (Docket #3). The PSC moved that the one year waiting period between filing the letter of intent and the application be shortened to thirty days (Docket #2, Commission Motion acknowledging Letter of Intent). An Application for a Certificate of Site Compatibility and Route Permit was subsequently submitted on 22 December 2011 (Docket #6-19, Application) and supplemented on 7 February 2012 (Docket #11, Application supplement). A Certificate of Site Compatibility No. 131 and Route Permit No. 140 was issued on 11 April 2012. A ten year plan was on file in the Project docket (Docket #6-2, 10 year plan). An updated ten year plan was also submitted in 2012 under a different case number (Case no. PU-12-673 Docket #1, 2012 ONEOK Rockies Midstream 10 year Plan).

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

Record of the pre-construction conference was on file (Docket #38, Preconstruction meeting discussions) and an email notice that construction had begun was provided (Docket #40, ONEOK Construction start notice).

3.3.3 Maps of Approved Corridor

Maps of the approved corridor and associated GIS files were received on 31 August 2012 (Docket #56, Maps of approved corridor). This submittal was past the 3 month deadline, but Wenck does not consider this a concern. The maps were inspected in relation to the on-the-ground infrastructure of the facility and appeared to coincide.

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 and as-built drawings.

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 #24, Exhibit 3);
- ND Department of Trust Lands School Trust easement and associated road crossing permit; and
- Road crossing (boring) permits (Docket #39, Permits and State of North Dakota easements; Docket #43, Hardscrabble and Hebron Township Permits):
 - North Dakota Department of Transportation: Utility Occupancy Application and Permit for crossing US Highway 2.
 - Williams County Road Crossing Permits for: County Road 5A, Round Prairie Township from Section 7 to 18 T154N R103W; County Road 5A, Round Prairie Township from Section 19 T154N R103W to Section 24 T154N R104W; and County Road 5A, Hebron Township.
 - Round Prairie Township Road Crossing Permits for: Graded gravel road crossing from Section 5 to 6 T154N R103W; 53rd St. NW from Section 6 to 7 T154N R103W; 51st St. NW from Section 18 to 19 T154N R103W; Section line road from Section 25 to 36 T154N R104W; and Section line road from Section 36 to 35 T154 R104W.
 - Hardscrabble Township Road Crossing Permits for: Township two-track road from NE $\frac{1}{4}$ to the SW $\frac{1}{4}$ Section 2 T153N R104; 155th Ave. NW from Section 2 to 11 T153N R104W; 155th Ave. NW from Section 10 T153N R104W; 155th Ave. NW from NE $\frac{1}{4}$ of NE $\frac{1}{4}$ of Section 10 153N R104W; and Township two track road from Section 10 to 24 T153 R 104W (Docket #43, Hardscrabble Township road crossing permit and Hebron Township crossing application).
 - Hebron Township: Permit for a total of three bores without specific locations.

There was also a utility crossing permit on file (Docket #39, Permits and State of North Dakota easements) for crossing underneath the existing pipeline located in Section 10 T153N R104W owned by Northern Border Pipeline Company and operated by TransCanada.

3.3.6 North Dakota One-Call

There was no written documentation that ONEOK participated in North Dakota One-Call. However, ONEOK's representative verbally confirmed that One-Call was utilized prior to construction (Greg Underwood, pers. comm. 2012). In addition, as-built alignment sheets indicated numerous utility locations along the route, indicating knowledge of existing utility lines.

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 #5, #30, ND SHPO Concurrence letters).

3.4.2 Cultural Site Avoidance

Three (3) previously discovered prehistoric feature sites and seventeen (17) newly recorded cultural resource sites were documented from the archeological survey submitted to ND SHPO in December 2011 (Docket #6-16). Seven (7) sites were located near the pipeline, but were more than 50ft from the edge of the construction ROW. The ONEOK representative verbally confirmed that cultural sites were staked prior to construction, and no impacts to those areas occurred (Greg Underwood, pers. comm. 2012).

3.4.3 Reporting

No new discoveries of cultural, archeological, or historic sites have been reported to the PSC to date. Presumably no new sites were encountered during construction of the Project. An Unanticipated Discovery Plan for the Project was on file (Docket #6-24, Stateline Pipeline Unanticipated Discovery Plan), so if any cultural resources had been discovered, a procedure was in place to protect them.

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 11 May 2012 (Docket #40) and ended 15 September 2012 (Docket #61). However, the USFWS suggested that if construction occurred during this season, the entire ROW be bladed to provide sufficient habitat manipulation to prevent migratory bird nesting in the area. During the Project hearing, a ONEOK witness testified that the USFWS has previously recognized mowing as a sufficient means of habitat manipulation to prevent migratory bird nesting and mowing would cause less erosion and other adverse impacts (Findings of Fact, 14). Weekly construction reports confirmed that the entire route was mowed prior to construction (Docket #42, 45-48). It appears that ONEOK followed the purpose of the recommendation (habitat manipulation by mowing) rather than the specific recommendation of the USFWS (blading the corridor).

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, but some disturbances did occur (**Appendix A, Photos 13**) (See Section 3.5.3 for more details).

Some measures recommended by the USFWS were not able to be confirmed. A pedestrian survey, rather than an aerial survey recommended by the USFWS, for eagle (bald and golden) nests was part of

the Natural Resources Report (Docket #6-22). The survey indicated specifically that no bald eagle nests were present along the Project corridor. However, it was unclear if golden eagle nests were present. The report stated that “no nesting golden eagles were observed during the field surveys but suitable habitat was present”. It did not state specifically if any golden eagle nests were observed. There was no written verification that if nests were present, they were marked to be avoided during construction. Other threatened and endangered species and habitat were identified by the USFWS being in close proximity to the Missouri River. Since the Project crossed the Missouri River in Montana, minimization of impacts to threatened and endangered species habitat close to the river was not confirmed. In ND, it appeared that ONEOK minimized impacts in areas of potential threatened and endangered species habitat (e.g. high quality native prairie and wetlands).

3.5.2 Native Prairie

Most of the Project was located in cultivated lands. However, native prairie was crossed for approximately 5 miles of the 13-mile corridor. During the inspection, it was observed that some of this native prairie had been disturbed prior to construction by heavy grazing or invasion by non-native species. Project disturbances did not appear to have been minimized in areas of native prairie in addition to the standard minimization efforts along the rest of the pipeline corridor. However, given the low quality of the native prairie that was disturbed, Wenck does not consider this to be a concern.

3.5.3 Wetlands

There were three (3) jurisdictional wetlands crossed by the Project (Docket #6-23, Natural Resources Report). In the Application, it stated that disturbance to wetlands would be avoided. However, the one wetland crossing observed appeared to have disturbed vegetation (**Appendix A, Photo, 13**). It was unclear if the area had been bored and then disturbed by construction traffic, or disturbed by open trenching. If the appropriate permits had been acquired, open trenching through the wetland would not be considered an issue. However, no such wetland permit was on file with the PSC. Wenck recommends the PSC request permits from ONEOK regarding disturbances to wetlands, and/or documentation of mitigation measures used by ONEOK during construction that would have avoided disturbance to wetland areas.

3.5.4 Reporting

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 the pipeline trench had been backfilled, soils had been recontoured, and reseeded had been completed, with vegetation beginning to establish in some areas (**Appendix A, Photo 4**). However, the majority of the route did not have established vegetation (**Appendix A, Photo 2, 3, 5-16**). The ONEOK representative stated that a state-approved seed mix was used in non-agricultural areas and a specifically requested seed mix was used on ND Trust Lands. Wenck recommends the PSC request documentation from ONEOK when vegetation has been fully established in the disturbed Project corridor.

3.5.6 Tree & Shrub Mitigation

A Tree and Shrub Mitigation Plan was submitted for the project on 17 October 2012 (Docket #62). The report indicated that tree and shrubs identified along the pipeline route were avoided by “necking down” the ROW (reducing the width) in these areas, or by boring underneath. Wenck observed that impacts to all shelterbelts and tree and shrub locations indicated in the Mitigation Plan were avoided

(**Appendix A, Photo 9, 15**). No trees or shrubs were removed for the Project and thus the PSC Tree and Shrub Mitigation Specifications are considered complete.

3.6 CONSTRUCTION, RECLAMATION & SOILS

3.6.1 Construction Management & Safety

The Environmental contractor retained by ONEOK assisted Wenck staff during the site visit, and was on site during the entire construction process. Weekly construction reports were submitted weekly for the duration of construction (Docket #42, 45-55, 57-61, Weekly Construction Reports). Every 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. As ordered by the PSC, there were several occasions where construction was halted due to adverse weather conditions: eight times for rain and four times for muddy conditions (Docket #42, 46-48, 50, 53, 54).

3.6.2 Pipeline Depth

The PSC Order stated the pipeline must be buried to 48in in rangeland, cultivated land, and bottoms of ditches for road crossings, and 72in in undeveloped section lines. Wenck did not visually confirm the depth of the pipeline, but ONEOK's representative stated that the pipeline was buried to the specified depth and deeper where it bored under roads and wetlands (Greg Underwood, pers. comm. 2012).

3.6.3 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, Photo 7**). There was no erosion problems observed along the entire pipeline ROW during the inspection. Fugitive dust and noise were presumably controlled during construction activities.

3.6.4 Minimization of Impacts

In general it appeared during the site visit 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 indications of crop stress were 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. Staging and laydown areas were located within the 250ft ROW and no temporary areas were used outside of the route. Wenck observed that all topsoil appeared to be replaced to the required depth.

3.6.5 Graded Roads Bored

Wenck verified that all county road and highway crossings had been directionally bored, with the route of the pipeline indicated by markers at all locations (**Appendix A, Photos 5, 6, 7, 8, 10, 11**). There were remarks in the weekly construction reports when boring took place across these roads or intersections (example Docket #54, 55, Weekly Construction Reports). ONEOK reported that the bore for each of these crossings began and ended further out in adjacent agricultural fields, not in the road ditches. However, vegetation in the ditches appeared to have been disturbed in some areas (**Appendix A, Photos 6, 7, 8**). Final establishment of vegetation should alleviate these disturbances (see Section 3.6.7 for further details on reclamation).

3.6.6 Noxious Weeds

One population of Canada thistle (*Cirsium arvense*) was identified during natural resource surveys just south of US Highway 2 at milepost 7.2. Mitigation measures were identified in the Application to prevent the spread of noxious weeds during construction. At the time of the inspection, the vegetation in the disturbed area around the population had not established after reseeding; if mitigation measures were applied to prevent the spread, this was unable to be confirmed during the inspection. Wenck recommends that the PSC request ONEOK to monitor the area surrounding the population in order to confirm that mitigation measures were successful and/or continue to implement measures to prevent the spread of Canada thistle post-construction.

3.6.7 Reclamation & Roads

Final reclamation activities were still ongoing in areas that had been disturbed by construction. Weekly construction reports indicate that cleanup and reclamation had occurred concurrently with construction activities (Docket #45-55, 57-61). At the time of the inspection, the pipeline trench had been backfilled, soils had been recontoured, and reseeding had been completed, with vegetation beginning to establish in some areas (**Appendix A, Photo 4**). However, the majority of the route did not have established vegetation (**Appendix A, Photo 2, 3, 5-16**). No temporary roads had been used during construction because all disturbances, including laydown areas, occurred within the 250ft ROW. Wenck noted that all county roads and highways within the Project area appeared to be in good condition and properly maintained. Wenck recommends that the PSC request documentation from ONEOK when final reclamation is complete and vegetation has established.

3.6.8 Repairs & Waste

Numerous fences had been repaired where the Project crossed fencelines (**Appendix A, Photos 6-8, 10, 12, 16**). ONEOK reported there had not been any agricultural fields with drainage tile impacted by construction of the Project. There was no waste or debris observed during construction, but equipment was still present along the route that still needed to be demobilized (**Appendix A, Photo 16**). ONEOK's representative confirmed that it would be demobilized after final punch list items were completed (Greg Underwood, pers. comm. 2012).

3.6.9 Damage to Underground Facilities

No reports of damage to underground facilities were reported to the PSC. Wenck confirmed with ONEOK's representative that no damage to facilities occurred during construction (Greg Underwood, pers. comm. 2012).

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, signs marking the pipeline route, and warning signs around the block valve at the beginning of the pipeline. No reports of extraordinary events were filed to date with the PSC.

3.7.2 Maintenance

The ONEOK representative indicated that pipelines typically need little maintenance after construction, but the Project is inspected by airplane several times a year to identify any potential issues or problem

areas. There was no waste or debris observed during the inspection. A construction vehicle was present along the route (**Appendix A, Photo 16**), but the ONEOK representative stated it would be removed following final demobilization (Greg Underwood, pers. comm. 2012).

3.7.3 Public Contact & Safety

There was fencing and safety signs around the block valve at the start of the pipeline, restricting public access to the area (**Appendix A, Photo 1**). However, safety fencing and signage around the other block valves still needed to be installed (**Appendix A, Photo 10, 14**). Wenck recommends that ONEOK confirm this was completed. Warning signs marking the location of the pipeline had been installed and were in place at all fencelines and road crossings (**Appendix A, Photos 1-3, 5-12, 16**). A procedure for handling complaints was presumably in place based on discussions during the preconstruction meeting (Docket #38, Preconstruction meeting discussions). The ONEOK representative indicated that resident concerns and issues are handed promptly and ONEOK makes every reasonable attempt to alleviate problems caused by the Project.

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 some were more important than others and Wenck suggests they be on file with the PSC to confirm compliance. Wenck recommends the PSC request from ONEOK if the PSC deems appropriate, the list of “Potential” items.

Potential Items

- Written verification of compliance with US DOT 49 CFR Parts 194 and 195.
- Written verification of compliance with certain wildlife protection measures.
- Verification that no threatened or endangered species or bald or golden eagles were observed within the Project area during construction or during operation to date. Example of notice that would be provided to USFWS if such a species was observed.

4.2 FINAL RECLAMATION AND RESEEDING METHODS

The project was commissioned on 15 September 2012 and was inspected on 27 September 2012; final reclamation activities and establishment of vegetation was ongoing. To ensure soil erosion is prevented and the disturbed area is fully reclaimed, revegetation should be monitored within the Project corridor. Wenck recommends that the PSC request documentation from ONEOK when the Project corridor has established vegetation.

4.3 WETLAND DISTURBANCES

The Application stated that disturbance to wetland areas would be avoided by workspace modification, horizontal drilling, and/or use of BMPs. However, disturbance to wetland vegetation was observed. This would not be a concern if the appropriate permits had been acquired, but no such permit was on file with the PSC. Wenck recommends that the PSC request from ONEOK the appropriate permits for construction/disturbance in wetland areas and/or documentation of mitigation measures used by ONEOK during construction that avoided disturbance to wetland areas.

4.4 NOXIOUS WEED MANAGEMENT

Specific methods were identified in the Application that would be used to prevent the spread of a population of Canada thistle present in the Project corridor. At the time of the inspection, the vegetation in the disturbed area around the population had not established after reseeding; if mitigation measures were applied to prevent the spread, this was unable to be confirmed during the inspection. Wenck recommends that the PSC request ONEOK to monitor the area surrounding the population in

order to confirm that mitigation measures were successful and/or continue to implement measures to prevent the spread of Canada thistle post-construction.

4.5 PROTECTION MEASURES AROUND BLOCK VALVES

During the inspection, fencing and warning signs had yet to be installed around two block valves. Wenck recommends that the PSC request documentation that fencing and safety signs have been installed around these block valves.

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. However, Wenck observed several issues that may need to be resolved before the Project is considered complete and in full compliance. This includes provision of written documentation of particular aspects of project implementation, installation of fencing and signage around block valves, confirmation of certain noxious weed management measures, permits or mitigation measures used to minimize disturbance of wetland areas, and final reclamation and reseeding. 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). 2013. Online Case Search. Available from:
http://www.psc.nd.gov/database/company_case_list.php. Accessed November, December
2012.

Underwood, Greg. 2012. Construction Compliance, E3 Environmental, Inc. Personal Communication:
discussion during site visit.

7.0 Signatures

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., Associate/Regional Manager

2/7/2013
Date



Luke Toso, Botanist/Natural Resource Scientist

2/7/2013
Date

Figures

- General Observation Point
- Road Bore
- Shelterbelt Avoided
- Shelterbelt Bore
- Wetland Bore
- As-Built Pipeline Route
- ▭ ND Township
- ▭ ND Section

**Stateline Gas Plant
Pipeline Start**

Pipeline End in ND

2010 Aerial Photograph (Source: Bing Maps)
 1 inch = 6,500 feet

Path: J:\GIS\2579103107 ONEOK Pipeline\mxd\Figure 1.mxd
 Date: 2/6/2013 Time: 8:45:41 AM User: TosLB0466



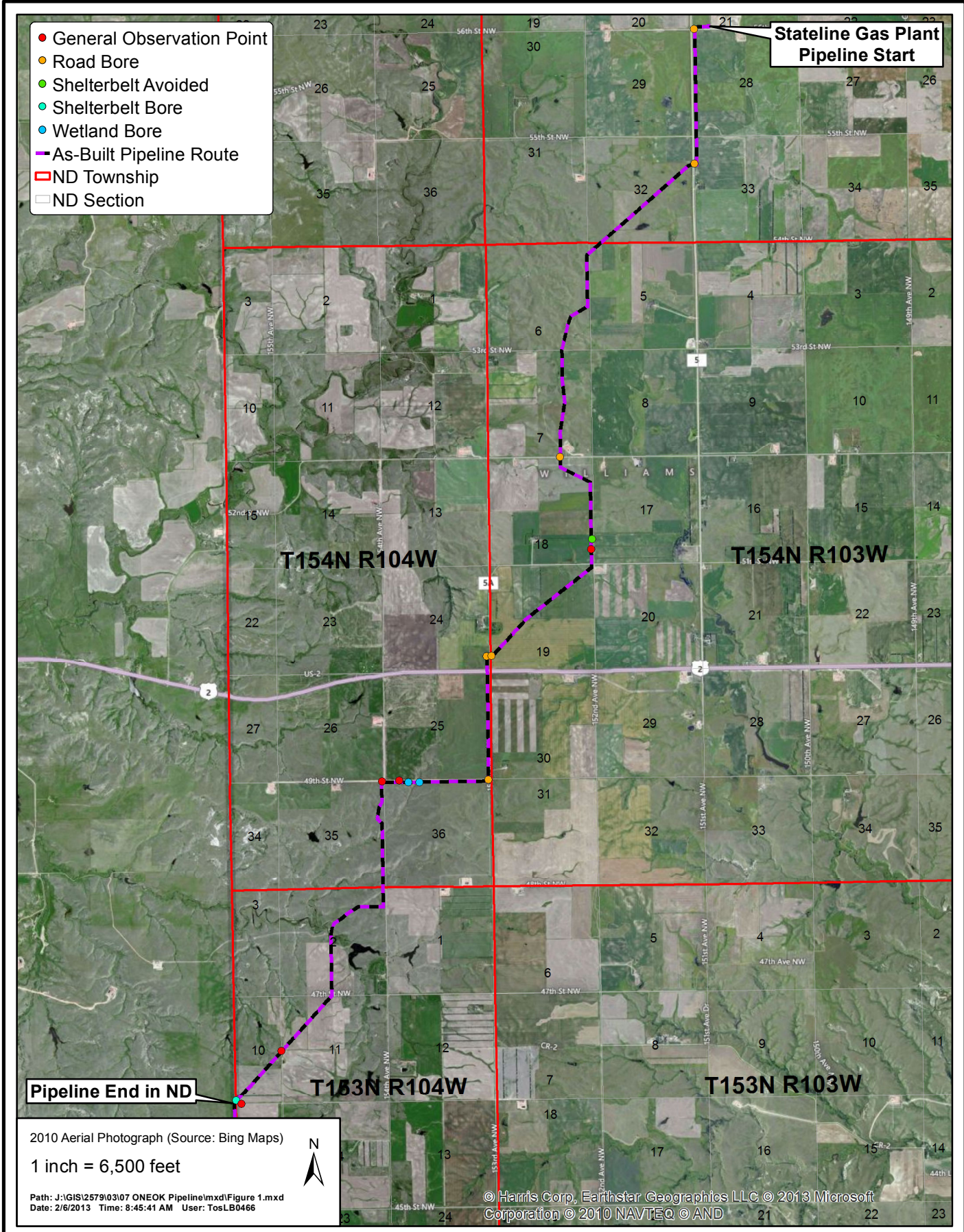
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North Dakota Public Service Commission
 Project Area and Field Observation Map

Wenck
 Engineers - Scientists
 Business Professionals
 www.wenck.com

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FEB 2013
 Figure 1



Appendix A

Photographs



Photo 1. Direction: North. View of the beginning of the pipeline at the Stateline Gas Plant in Williams County, North Dakota. Note posted warning signage and fence surrounding block valve, which is located at the launcher barrel.



Photo 2. Direction: West. View of the pipeline as it leaves the processing plant. The driveway to the plant was bored. Note the posted warning signage.



Photo 3. Direction: South. View of the pipeline going south, paralleling ND Highway 5 (visible on right side of photo).



Photo 4. Direction: Northeast. View toward the Stateline Processing Plant from the intersection of the pipeline with County Highway 5. Note green vegetation that has begun to establish along the ROW.



Photo 5. Direction: West. View shows the road bore of County Highway 5 on the east side. No settling to the roadway was noted. Note the three posted signs: on the east and west side of the roadway, and one near the fenceline on the west side.



Photo 6. Direction: West. View of the west side of the road bore of County Highway 5, shown by the disturbance area on the west side of the repaired fence. A posted sign is just visible in the distance, to the right of the power pole.



Photo 7. Direction: West/Southwest. The east side of 52nd St NW showing erosion control in the road ditch, repaired fence, posted signage, and the cathodic protection system (indicated by the red topped white tube on the fenceline).



Photo 8. Direction: South. View of the road bore underneath 52nd Ave. Note posted signs and the cathodic protection system (white tube located near the center of the ROW).



Photo 9. Direction: North. View north toward a shelterbelt adjacent to the pipeline route. The disturbance was limited to the width shown and no tree or shrubs were impacted. Note posted signage along fenceline.



Photo 10. Direction: Southwest. View of 51st St block valve, south of 51st St. Note posted signage and repaired fence. Sandblasting and fence construction around the block valve was completed after the construction inspection.



Photo 11. Direction: East. View of the road bore of County Road 5A on the west side. No settling or disturbance was noted to the roadway. Note posted signage indicating the pipeline route. The field access/approach was in place prior to construction, and appeared in good condition.



Photo 12. Direction: South. View of the pipeline south of 49th St. An aboveground cathodic protection system marker is shown here (white tube with red cap), next to the repaired fenceline.



Photo 13. Direction: West. Just south of 49th St., view of the pipeline where it was bored under a wetland. No sedimentation to the wetland was noted, but vegetation had been disturbed by vehicle traffic.



Photo 14. Direction: Northeast. View of the third valve setting along the route in North Dakota. Sandblasting and fence construction around the block valve was completed after the construction inspection.



Photo 15. Direction: Northeast. View of the proposed pipeline where it was bored under a shelterbelt. No disturbance to the area or to trees or shrubs was noted.



Photo 16. Direction: Southwest. The fenceline is the boundary where the pipeline leaves North Dakota and enters Montana. Note the posted signage and cathodic protection system (black topped white tube). The construction vehicle shown in the upper left had yet to be demobilized from the Site.

Appendix B

Field Observation Points

Appendix B. Field Observation Points

Point	Latitude	Longitude	Feature
272	48.142497	-103.993002	Road Bore
273	48.142579	-103.991999	Road Bore
274	48.125743	-103.992950	Road Bore
275	48.125530	-104.006935	Wetland Bore
276	48.125513	-104.009143	Wetland Bore
277	48.125811	-104.011006	General Observation Point
278	48.125710	-104.014476	General Observation Point
279	48.089450	-104.035459	General Observation Point
280	48.082737	-104.044697	Shelterbelt Bore
281	48.082258	-104.043708	General Observation Point
282	48.156756	-103.971578	General Observation Point
283	48.158132	-103.971431	Shelterbelt Avoided
284	48.169224	-103.977692	Road Bore
285	48.208706	-103.949715	Road Bore
286	48.226968	-103.949403	Road Bore

