

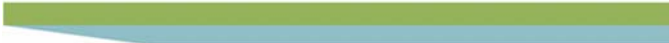


# 10-INCH CRUDE OIL PIPELINE (PU-14-135) Permit Compliance Final Inspection Report



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## 1 EXECUTIVE SUMMARY

The North Dakota Public Service Commission (Commission) retained Houston Engineering, Inc. (HEI) to complete a construction inspection of the 10-inch Crude Oil Loop Pipeline project in Billings, Dunn, and Stark Counties, North Dakota (ND), owned and operated by Belle Fourche Pipeline Company. Construction of the Project was completed in May 2015. HEI reviewed all project documents to identify those aspects that required compliance and visually inspected the project area on March 10, 2015, June 8, 2015, and most recently July 18, 2016.

During the inspection, HEI observed that the project appears to have generally been constructed according to the specifications outlined within the project application. The approximate 20 miles of new 10-inch pipeline and associated facilities at its Skunk Hill Station and its Dickinson Station appear to have been installed at the locations described in the application. Much of the site has been restored to its previous use. No significant issues were documented during the inspections.

## 2 INTRODUCTION AND BACKGROUND

### 2.1 PROJECT BACKGROUND

The Belle Fourche Pipeline Company (Belle Fourche) is proposing to construct a 10-Inch crude oil loop pipeline is located in Billings, Dunn and Stark Counties, North Dakota. The Project consists of a new 20-mile-long liquid petroleum pipeline that interconnects with Belle Fourche facilities at Skunk Hills Station and Dickinson Station to supply Bakken Oil Express (BOE) Rail Facility and the Dakota Prairie Refining facility in North Dakota. The new section of pipeline parallels an existing Belle Fourche 6-inch line from Skunk Hill Station to Dickinson Station and operationally integrates into the existing operations of Belle Fourche. The Project will be owned and operated by Belle Fourche. The Project is under the jurisdiction of the North Dakota Public Service Commission (Commission), which issued its Order in Case No. PU-14-135.

As background, on March 20, 2014, Belle Fourche filed applications for a certificate of corridor compatibility and a route permit to authorize construction of the Project. Also on March 20, 2014, Belle Fourche filed an application for waivers of procedures and time schedules established under North Dakota Century Code Sections 49-22-07.2, 49-22-08(5), 49-22-08.1(5), 49-22-13, and North Dakota Administrative Code 69-06-01-02. On April 23, 2013 the Commission deemed Belle Fourche's applications complete and issued a Notice of Filings and Notice of Hearing for June 23, 2014.

The Commission issued its Findings of Fact, Conclusions of Law and Order on July 10, 2014 for Case No. PU-14-135, Belle Fourche Pipeline Company 10-Inch Crude Oil Pipeline located in Billings, Dunn and Stark Counties. The Order granted Belle Fourche's request for a waiver of procedures and time schedules; a Certificate of Corridor Compatibility No. 156 designating a corridor for construction, operation and maintenance of the Project; a Route Permit No. 168 granting authority to construct the pipeline along the designated route; and a Certification Relating to Order Provisions-Energy Conversion Facility Siting executed on June 6, 2014.

### 2.2 PURPOSE OF THIS REPORT

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code (NDCC) Chapter 49-22) authorizes the 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 (NDCC, Chapter 49-22) and rules (North Dakota



Administrative Code (NDAC) Article 69-06) and the applicable Commission Findings of Fact, Conclusions of Law, and Order (Order). The Commission retained HEI to complete a construction inspection of the Project.

## 2.3 METHODS OF INSPECTION

### 2.3.1 PROJECT COMPLIANCE ITEMS IDENTIFIED

HEI identified project provisions as outlined within the Certification Relating to Order Provisions, which was included in the order and is verified through written documentation of by an on-site inspection. The project Findings of Fact, Conclusions of Law and Order and the Certification Relating to Order Provisions (July 10, 2014) provides these project provisions.

### 2.3.2 REVIEW OF DOCUMENTATION

HEI staff reviewed publicly-available Project documents in the Commissions project records for Case # PU-14-135 to view written verification of compliance for the Project specifications listed within the Certification Relating to Order Provisions.

### 2.3.3 ON SITE INSPECTION

HEI conducted three (3) compliance site visits throughout the construction period. The dates of these inspections were March 10, 2015, June 8, 2015 and July 18, 2016. The timing of the site visits were coordinated with Belle Fourche and were based on construction progress. The site was inspected visually by walking the pipeline right-of-way and examining points of interest within the corridor. Points of interest included active trenching areas, roadway crossings, and when construction was occurring near wetlands areas. Digital photographs were taken showing typical project infrastructure and for documentation of permit provision activities.

The project provisions verified during the site inspection, and included with the Project Records, are described in the Findings section below.

## 3 FINDINGS

### 3.1 SUMMARY OF FINAL SITE VISIT

The first two site visits, which were conducted during active construction, have been previously reported to the Commission construction progress reports submitted on behalf of the Project. The final site inspection, which was completed on July 18, 2016 by Mr. Andrew Vistad, Civil Engineer. Mr. Vistad coordinated with Mr. Don Clark from Belle Fourche while on site. The final site visit involved a full site tour of the Project and observations of the reclamation areas. Photographs were taken and locations documented in **Appendix A, Site Photography**.

**Photograph 1** was taken at the start of the project at the first roadway crossing. Reclamation was observed and appeared successful as it was not obvious where the pipeline had been installed until identified by Mr. Clark from Belle Fourche. The corridor was identified by the slight thinning of grasses that were not fully established yet at the time of inspection. In another area of the route, a section of grass failed to reestablish in a pasture (**Photograph 2**). At this site, evidence of livestock activity was observed, which may contributed to the lack of established vegetation.

Reclamation in other areas was characterized by an influx of weeds in the areas disturbed during construction. **Photographs 3 and 4** show some evidence of weed growth. Mr. Clark discussed some spraying of weeds has been conducted in their continuing efforts to establish native grasses.

Reclamation in wetland areas was observed as evidenced by the established vegetation. No construction impacts to wetland areas was observed.

Impacts on cropland were minimal. In one location, a farmer was using the smoothed areas over the pipeline to access his hay field. This had a negative impact on the revegetation efforts, but these impacts were unrelated to the project construction activities. All fence crossings were repaired to equal or better standards. Each crossing had a gate installed with a metal hand latch (**Photograph 12**), which allows Belle Fourche employees to access the pipeline in the future without any impacts to the fence.

Near the end of the Project route, the pipeline crossed another larger pipeline owned by a different company. At this intersection, valves were installed aboveground for the other company's line. In this location, large bare spots were observed which are related to construction of the adjacent valves. (See **Photographs 13 and 14**)

Reclamation activities on the remainder of the Belle Fourche Project area appeared successful at the time of our inspection.

## 3.2 SITE INFORMATION

### 3.2.1 DESIGNATED LOCATIONS

The Project was built as proposed in the designated location described in the Application and Order. Maps of the approved corridor and construction plans coincide with onsite observations during the site inspection.

### 3.2.2 SITING CRITERIA

Siting criteria were analyzed in detail in the Application for the Project. HEI has confirmed that there were no exclusion or avoidance areas within the pipeline corridor. Minor impacts to agricultural production were observed and are described below.

### 3.2.3 LAND USE AND AGRICULTURAL IMPACTS

No active farmland is being converted as a result of this Project. The pipeline is buried and all farmland has been returned to their pre-construction land uses. This was confirmed during the site inspections. In addition, all farmland taken out of production has returned to its previous agricultural use (see **Appendix A**, Photos 5, 7 and 9)

## 3.3 PROJECT DESIGN AND ENGINEERING

### 3.3.1 STRUCTURE SPECIFICATIONS

A new 10-inch pipeline has been installed and buried (see **Appendix A**, Photo 15). During active construction, burial depths were visually confirmed. HEI consulted the as-built documents to verify that the constructed pipeline conforms to the project depth specifications.

### **3.3.2 ENGINEERING DESIGN DRAWINGS**

Engineering design drawings are not required, were not provided to the NDPSC, and are not included as an exhibit in the docket.

### **3.3.3 AS-BUILT DRAWINGS**

As-built alignment drawings were filed on October 2, 2015, document number #56, (As-Built drawings). The as-built drawings were reviewed in relation to the on-the-ground infrastructure of the facility and appeared to coincide.

## **3.4 PRE-CONSTRUCTION**

### **3.4.1 PSC-REQUIRED DOCUMENTS**

The Consolidated Application for Certificate of Corridor Compatibility and Route Permit was submitted on March 20, 2014. (Docket #1). The PSC issued Certificate of Corridor Compatibility No. 156, and Route Permit No. 168 on July 10, 2014.

### **3.4.2 PRE-CONSTRUCTION CONFERENCE/WEEKLY UPDATES**

The pre-construction conference call took place January 14, 2015. Meeting minutes from the pre-construction conference call were submitted on October 6, 2015 (Docket # 58). Construction reports were filed weekly during construction (document #'s 39-46, 49, 50, 52).

### **3.4.3 PERMITS AND APPROVALS FROM OTHER AGENCIES**

No documentation is found within the project file that indicates additional permits were required as part of this project, and no additional information regarding permitting details was submitted to the Commission.

### **3.4.4 COMMISSION APPROVAL OF MODIFICATIONS**

There were no notifications to modify the pipeline route filed to date. Observations of on-the-ground infrastructure coincided with maps in the Application.

## **3.5 CULTURAL RESOURCES**

### **3.5.1 CULTURAL SITE AVOIDANCE**

The North Dakota State Historical Society reviewed the Class III Cultural Resources Survey and concurred with the "No Significant Sites" determination (document #15), provided that the Project corridor remains as described as mapped within the Application. HEI concludes that the Project was constructed as described within the Application resulting in no impacts to cultural resources.

### **3.5.2 REPORTING OF NEW DISCOVERIES**

No new discoveries of cultural, archeological, or historical sites were reported to the Commission during construction, and no discoveries were noted on the weekly construction reports for the Project. As such, it can be concluded that no new sites were encountered during construction of the Project.

## 3.6 NATURAL RESOURCES

### 3.6.1 WETLANDS, SURFACE WATER, AND FLOODPLAIN

A wetland delineation report was not included in the Application. The National Wetland Inventory figure was included in the Application. The Application states that all wetlands and surface water features would be directional bored to avoid temporary surface impacts. This was verified during our field visits.

### 3.6.2 RARE, THREATENED AND ENDANGERED SPECIES REPORTING

There were no reports filed documenting the presence of threatened or endangered species, and no bald or golden eagles were sighted during construction. This was confirmed as there were no records on the weekly construction reports for the Project.

### 3.6.3 TREE AND SHRUB MITIGATION

There is no tree or shrub mitigation needed for the project.

## 3.7 CONSTRUCTION, RECLAMATION & SOILS

### 3.7.1 EROSION AND SEDIMENTATION CONTROL

The Project Application states that Best Management Practices (BMPs) will be utilized during construction to minimize the potential for sedimentation and erosion control. Minimal erosion problems were observed during the construction of site inspections. Revegetation efforts are successful as noted in the construction inspection reports.

### 3.7.2 RECLAMATION AND ROADS

The Project requires bypass of several existing roadways. All roadways bisecting the pipeline were directional bored and returned to their pre-construction condition. Roads accessing the site appeared to be in a condition typical for the area and do not appear to have been negatively impacted during construction (see **Appendix A**, Photos 10, 11, 16).

### 3.7.3 RESEEDING

The Order Provisions stated that disturbed areas will be restored to their original condition to the maximum extent practicable according to the Natural Resources Conservation Service recommendations. Much of the right-of-way is cultivated agriculture land, therefore landowners designated that the area be returned to the pre-construction condition. The disturbed areas that were not cultivated were seeded with like vegetation and restored to their original condition. No significant bare areas were observed in the corridor, and seeding activities were visible within these areas. HEI expects that after several more growing seasons, these areas will be completely indistinguishable from the surrounding lands.

### 3.7.4 REPAIRS

No damages to property were observed during the site inspections.

### 3.7.5 WASTE

The Project area was free of construction debris and equipment.

## 3.8 OPERATION

### 3.8.1 OPERATION AND MAINTENANCE

The site appeared to be operated and maintained as described in the Application. There is little maintenance required due to the nature of the facility.

### 3.8.2 SAFETY AND RECORD-KEEPING

No concerns were identified during the site inspection that would indicate that Project construction or operation was out of compliance with the Application or safety regulations. Construction reports document no safety concerns. No injuries or extraordinary events have been reported to date.

### 3.8.3 PUBLIC COMPLAINTS

No records of complaints regarding the Project have been filed to date.

### 3.8.4 PUBLIC SAFETY

Access to the facility components is not limited in any way. The facility is not easily recognizable as it is buried pipeline, and the Project spans private property used for agricultural production. As such, safety concerns regarding the public appear to be minimal.

## 4 CONCLUSIONS

### 4.1 FINAL CONCLUSIONS

Overall, the Project appears 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. One area contained bare spots post-reclamation activities, but these are attributed to farming activities. In any event, there were no erosion or sedimentation problems were observed. The Commission may elect to require the company to submit additional documentation that the restoration activities following another growing season. The purpose is to ensure establishment of sustainable vegetation.

Overall, HEI concludes that the Belle Fourche Pipeline Company, 10-Inch Crude Oil Pipeline construction is compliant with the provisions of the order issued by the North Dakota Public Service Commission.

## 5 SIGNATURES

The services provided by HEI scientists and engineers 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 judgement 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.

  
Barton Schultz, Project Manager

8/30/16  
Date

  
Emmy Baskerville, Environmental Scientist

8/30/16  
Date

## 6 REFERENCES

North Dakota Public Service Commission (NDPSC) 2016. Online Case Search. Available from: <http://psc.nd.gov/public/casesearch/>. Accessed August 4, 2016.

## APPENDIX A: SITE PHOTOGRAPHY

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**Photo 1:** Reclamation at beginning of project (facing East). 7-18-16



**Photo 2:** Area lacking vegetation establishment (facing North). 7-18-16



**Photo 3:** Reclamation – from center of image to right side (facing Northwest) 7-18-16.



**Photo 4:** Reclamation from center of image to bottom (facing Northwest). 7-18-16



**Photo 5:** Reclamation through wetland (facing Southeast).

7-18-16



**Photo 6:** Reclamation of wetland (facing West). 7-18-16



Photo 7: Reclamation of wetland  
(facing East). 7-18-16



**Photo 8:** Reclamation of wetland -  
pipeline runs from left to right -  
across picture (facing North).

7-18-16



**Photo 9:** Reclamation (facing South). 7-18-16



**Photo 10:** Reclamation (facing Southeast). 7-18-16



**Photo 11:** Reclamation (facing Northwest). 7-18-16



**Photo 12:** Installed fence repair and gate (facing Southeast).

7-18-16



Photo 13: Reclamation near valve (facing Northwest).

7-18-16



**Photo 14:** Reclamation near valve (facing Southeast). End of project.

7-18-16



**Photo 15:** 3- During construction burial depths were visually confirmed.

3-10-15



**Photo 16:** Post-construction road condition.

6-9-15