

Reclamation and Revegetation Inspection Report

Spring Creek Pump Station - McKenzie County
ONEOK BAKKEN PIPELINE, LLC

ND PSC Case No. PU-15-725

Prepared for:

North Dakota Public Service Commission
Public Utilities Division
State Capitol
600 East Boulevard – Dept. 408
Bismarck, ND 58505-0480



September 2017

Table of Contents

EXECUTIVE SUMMARY	1
INTRODUCTION	2
PURPOSE AND SCOPE OF INSPECTION	2
METHODS	2
AS-BUILT INSPECTION FOLLOW-UP	3
OBSERVATIONS.....	3
RECOMMENDATIONS	4
MANAGEMENT REVIEW.....	4

Executive Summary

The State of North Dakota, acting through its North Dakota Public Service Commission (Commission), Division of Public Utilities, has contracted Keitu Engineers & Consultants, Inc. (Keitu) to perform consulting services for a reclamation and revegetation inspection. This report addresses the inspection findings concerning issues requiring resolution, areas of concern, recommendations for resolution of issues, and a determination whether the area affected by construction activities has been restored as near as practicable to the condition as it existed prior to the beginning of construction, including the establishment of desired plant species where applicable in Case No. PU-15-725.

The Spring Creek Pump Station is located in McKenzie County, North Dakota. The Station is owned and operated by ONEOK Bakken Pipeline, LLC (ONEOK). Construction for the Project began in April 2016 and was completed in September 2016. The purpose of the construction inspection was to ensure the Project was constructed in compliance with the siting laws, rules, and the applicable PSC Order for the Project. Prior to the construction inspection, Keitu reviewed all Project documents to identify any and all aspects requiring site verification.

The site was visually inspected on September 1, 2017 by Keitu staff. The Project at the time of inspection has not been restored as near as practicable to the condition as it existed prior to construction but is making progress. The summer of 2017 experienced severe to extreme drought which included a drought emergency in McKenzie County¹ This did not provide ideal conditions for establishing desired plant species during reclamation and typically unwanted species can be expected after one growing season with construction disturbances.

Overall, the project was well-maintained, secured, and in good condition. It appeared to be constructed as planned with numerous efforts to minimize impacts. Keitu listed six different items to be addressed at the Commission's discretion in the Recommendations portion of this report. If these items are addressed by ONEOK the Project area should be restored as near as practicable to desired site conditions.

¹ <http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?ND>

Introduction

The Spring Creek Pump Station (Project) was approved and constructed in 2016. The Project is operated by ONEOK Bakken Pipeline, L.L.C. (ONEOK), a wholly owned subsidiary of ONEOK Partners, L.P. The Project is a transmission facility improvement to their existing Garden Creek to Riverview NGL Pipeline in south-central McKenzie County. The pump station consists of three (3) 1500HP electrically driven pumps. The Project has begun operation and future construction was stated to be limited to constructing a building over the pumps. The fenceline of the property encompasses approximately 1.8 acres while the leased property is less than 5 acres. The Project is under the jurisdiction of the North Dakota Public Service Commission (Commission), which issued its Order Amending Certificate and Permit for Case No. PU-15-725 on February 10, 2016.

Purpose and Scope of Inspection

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 welfare of the citizens of North Dakota. Construction inspections ensure the Project is constructed in compliance with siting laws, rules, and the applicable Commission Order Amending Certificate and Permit (Order).

The Commission retained Keitu Engineers & Consultants, Inc. (Keitu) to complete a reclamation and revegetation construction inspection of the Project. The inspection process included a review of the Application for Amended Corridor Certificate and Route Permit (Application), Order, Certification Relating to Order Provisions (Certification), and other applicable documents to determine Project-specific siting and construction requirements; a site visit and inspection of facilities; documentation of compliance; and a report summarizing findings. This report includes, but is not limited to, site visit observations, documentation of compliance deficiencies, and a summary of issues and recommendations that should be addressed for the Project.

Methods

Keitu reviewed North Dakota siting laws and rules, the Application, Certification, and the Order for the Project to identify what Project-specific documentation was required for compliance. Keitu then reviewed Project documents in the PSC Online Case Search to identify those siting laws, rules, and Application and Order assertions that already had written verification, those that still required documentation, and those that required physical site verification.

Keitu staff visited the Project area on September 1, 2017 to visually inspect the site. Digital photographs were taken showing typical Project infrastructure and documenting any problem areas (starting page 5). The Project was in operation during the field visit. The site was gated with a chain-link fence. The emergency shutdown valves were noted in the SW and SE part of site and the receiving valve was located in the south central portion of the site.

As-Built Inspection Follow-Up

The following issues were found during the As-Built Inspection. They were not applicable to reclamation and revegetation of the Project, however, ONEOK did comply with the Order and Certification points found deficient during the As-Built Inspection.

- 1. The amended corridor and route are subject to the conditions and limitations stated in the Findings of Fact, Conclusions of Law and Order dated September 7, 2011, Case No. PU-11-66; the Findings of Fact, Conclusions of Law and Order dated December 2, 2011, Case No. PU-11-66: the company name change as authorized in PU-11-658; and the Order Reissuing Certificate and Permit dated December 4, 2013, Case No. PU-13-738; and are subject to the conditions and limitations stated in the Orders.**

An Updated Tree and Shrub Report was filed with the Commission on April 4, 2017. At the Commission's regular meeting on April 13, 2017 a partial tree and shrub mitigation plan was approved. Once planting is completed in 2018 and a final tree and shrub mitigation report is filed, the requirements set forth by this order will be met.

1. Certification Point 33 – As-built Drawings

An As-built plan was filed on April 4, 2017. This met the requirements as set forth by this certification.

Observations

At the time of inspection, the construction was completed. The pump station facilities within fence boundaries were clear of vegetation and completed with gravel for operations. Outside of the fence a majority of the areas were revegetated. On the south side of the Project there is an area free from any vegetation that is being used for vehicle access (Photo #1). In the vegetated areas, coverage ranged from approximately 40%-99%. Vegetation appeared stressed likely due drought conditions.

Common grass and forb species identified during the inspection are: smooth brome (*Bromus inermis*), intermediate wheatgrass (*Thinopyrum intermedium*), Canada wildrye (*Elymus canadensis*), horseweed (*Conyza canadensis*), and field bindweed (*Convolvulus arvensis*). While a majority of these species could be considered "weeds" and are non-native they are stabilizing and recovering the soil from construction.

State and County listed species identified during the inspection are: Canada thistle (*Cirsium arvense*) (Photo #2). A population of Canada thistle was observed near the culvert and along the entrance road to the Project.

One soil pile that appeared recently disturbed is being stored on site outside of the fenced boundary. (Photo #3). Stormwater BMP's are in place on the east side of the Project and in

working order except for one silt fence on the north side of the access road (Photo #4). Approximately 20 feet of the fence was not in working condition and torn off of the anchor stakes. During inspection it was noted there was a small amount of miscellaneous trash on the ground throughout site (Photo #5).

Recommendations

1. The access road have gravel laid on the surface or revegetated to prevent stormwater runoff as it is currently at risk of having sediment runoff during a rainfall event.
2. Management of Canada thistle onsite. North Dakota law requires everyone to do all things necessary and proper to control the spread of noxious weeds in North Dakota²
3. Apply stormwater BMPs to soil pile as it is currently at risk of having sediment runoff during a rainfall event.
4. Improve housekeeping onsite to prevent and remove trash from accumulating at the Project site.
5. Stormwater BMPs (silt fences) need maintenance to be in proper working condition.
6. Continual maintenance to be done to encourage revegetation of desirable species.

Overall, the Project appeared to be constructed as designed with minimal impacts to the surrounding environment. Revegetation appeared to be progressing with one full growing season especially during drought conditions.

Management Review

The services performed by Keitu and its 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.

Jaimee Antognazzi

9/14/2017

Jaimee Antognazzi, Operations Manager

Date

² North Dakota’s Noxious Weed Law and Regulations

Report Photo #1: Access road on south side of the Project.



Report Photo #2: Canada thistle near culvert.



Report Photo #3: Soil pile on south side of Project.



Report Photo #4: Silt fence in need of maintenance on east side of Project.



Report Photo #5: Trash scattered onsite.



Report Photo #6: View of Project looking northeast.



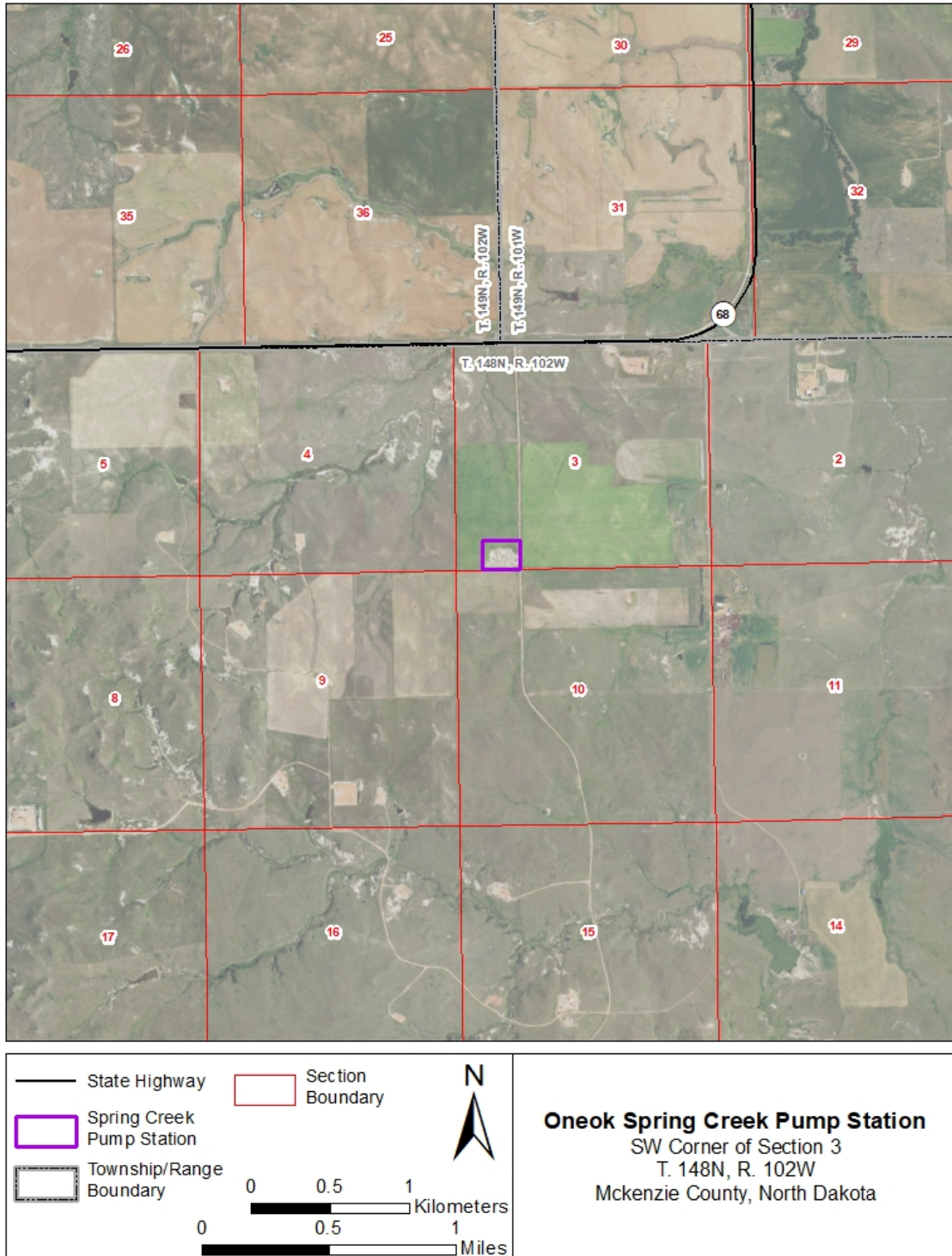
Report Photo #7: View of the Project area from the entrance road looking north.



Report Photo #8: View of the Project looking northwest.






Site Location: Spring Creek Pump Station (McKenzie County)



Photograph Locations: Spring Creek Pump Station (McKenzie County)



<p> Spring Creek Pump Station</p> <p> Township/Range Boundary</p> <p>0 0.02 0.04 Kilometers</p> <p>0 0.02 0.04 Miles</p> <p></p>	<p>Oneok Spring Creek Pump Station SW Corner of Section 3 T. 148N, R. 102W Mckenzie County, North Dakota</p>
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