



Oliver Wind IV 345kV Transmission Line Project Oliver County

Topsoil Inspection Report

Docket Number: PU-23-318

Prepared for North Dakota Public Service Commission



May 2024

Topsoil Inspection Report

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Contents

1	Executive Summary	2
2	Background and Scope	3
2.1	Introduction	3
2.2	Regulatory Purpose and Need	3
2.3	Scope of Work	3
3	Findings of Site Inspection.....	4
3.1	Methods	4
3.2	On-Site Inspection Observations.....	4
4	Issues to Resolve and Recommendations.....	4
5	Signatures.....	6

List of Appendices

Appendix A Photo Log and Observation Maps

1 Executive Summary

The North Dakota Public Service Commission (PSC) retained Meadowlark Environmental, LLC (Meadowlark) to complete a topsoil inspection for the construction of the Oliver Wind IV 345kV Transmission Line (Project) in Oliver and Mercer Counties, North Dakota (ND), constructed by NextEra Energy Resources, LLC (NextEra). The purpose of the inspections is to ensure the project is constructed in compliance with siting laws and rules and the applicable PSC Orders for the project.

The topsoil inspection was conducted on May 10th, 2024 during the start of construction activities to observe the removal of topsoil. Construction began at the location of the Project's laydown yard near the south end of the Project, with the removal of topsoil in a field previously used for crop production. The inspection was conducted to observe and document that equipment operators demonstrated the necessary skill for proper topsoil removal and knowledge of topsoil removal and segregation requirements. No major issues were observed. Overall, equipment operators demonstrated the ability to remove topsoil until the color change appears between topsoil and subsoil. Vegetation removal was consistent with the tree and shrub mitigation plan.

2 Background and Scope

2.1 Introduction

The 19.5-mile-long Oliver Wind IV 345kV Transmission Line Project is being constructed by NextEra to convey power from the associated Oliver IV Wind Energy Center collection substation in Oliver County, North Dakota to the point of interconnection at the Basin Electric Power Cooperative Leland Olds Station 345kV Substation in Mercer County, North Dakota. Approximately 10.8 miles of the transmission line are in Oliver County, and approximately 8.7 miles are in Mercer County.

The Project originates in Section 5, Township 142 North, Range 85 West in Oliver County, North Dakota. The transmission line runs north and east approximately 19.5 miles to the terminal point at the Basin Electric Power Cooperative Leland Olds Station 345kV Substation located in Section 27, Township 144 North, Range 84 West in Mercer County, North Dakota.

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 on April 29, 2024, and issued Certificate of Corridor Compatibility No. 233 Route Permit No. 243 for Case No. PU-23-318.

2.2 Regulatory Purpose and Need

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) charges the Public Service Commission with determining 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. Inspections during construction ensure that such projects are built 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 Orders.

2.3 Scope of Work

The North Dakota Public Service Commission retained Meadowlark to perform a topsoil inspection of the Project. Meadowlark's scope of work was to complete and document an on-site inspection during the start of construction to verify that topsoil was being removed and segregated from subsoil in compliance with the siting laws, rules, and applicable Commission Orders. This report contains site visit observations and a summary of findings and issues that should be addressed for the Project.

3 Findings of Site Inspection

3.1 Methods

Zach Peterson, Project Manager/Field Inspector for Meadowlark visited the Project site on May 10, 2024, to conduct the topsoil inspection. Representative for NextEra, DJ Gleason and Heath Kapke, Superintendent Blattner Energy accompanied Mr. Peterson. The inspection occurred between 8:30 AM and 11:30 AM. Construction activities for the Project were commencing for the Project at the time of the visit. Construction started with the clearing of approximately 10 acres of crop field to be used as a laydown yard for the Project.

Mr. Peterson observed equipment operators removing topsoil within a crop field with rolling topography to document that operators demonstrated the proper skill and techniques for removing topsoil and segregating the topsoil from any subsoil removed. The ability of operators to identify changes in soil color and characteristics as well as understanding the rules and regulations for topsoil removal were also noted. Photos (iPhone 12) were taken with a GIS overlay and without the overlay at observation points to record the geographic locations of the observation points visited during the inspection.

3.2 On-Site Inspection Observations

Mr. Peterson met Mr. Gleason and Mr. Kapke at the laydown yard site where construction activities commenced for the Project. A bulldozer and scraper simultaneously began stripping topsoil within the crop field and stockpiling removed topsoil along the east end of the site. Topsoil depth varied from 6 to 10 inches, with the top of the hillside having shallower topsoil depth and the bottom of the hill having the deepest depth. Both equipment operators carefully removed the topsoil until the subsoil layer became visible and moved the topsoil into piles on the east side of the area being cleared. The subsoil was not removed, so the topsoil piles were properly segregated from subsoil. Silt fence was installed along the eastern and southern sides of the site to prevent runoff from the topsoil piles from moving off the site. Straw waddles and additional silt fence will be placed around the edges of the topsoil piles to prevent sediment runoff in the event of heavy rainfall.

Both the bulldozer and scraper equipment operators demonstrated the proper understanding of the rules for topsoil removal and how to properly identify the change in soil characteristics between the topsoil and subsoil layers. Multiple passes with the blades were used over the same ground to remove the topsoil in increments until the subsoil became visible. This technique adequately removed the topsoil at proper depths across the varying contours of the area being cleared. Topsoil removal was being conducted in compliance with the Commission's Order.

4 Issues to Resolve and Recommendations

Topsoil segregation was noted to be acceptable in the areas observed. Equipment operators were reminded to strip soil, where it existed, down to a maximum of 12 inches or to the depth where subsoil appeared. Equipment operators have demonstrated proficiency in topsoil removal and segregation in compliance with the Commission's Order.

Potential Issues	Recommendations
SWPPP Maintenance	Silt fence, straw wattles, and other BMPs must be regularly checked to ensure sediment from the site does not runoff into the irrigation ditch and adjacent property.
Dust Control	During construction, road speed within the Wind Project will be limited to 25 miles per hour to minimize wildlife collisions and increase traffic safety by reducing dust emissions as a result of construction activities.

5 Signatures

The services performed by Meadowlark staff for this project have been conducted in a manner consistent with the technical skill and degree of care exercised by professionals currently practicing in this discipline under similar time and budget constraints. Findings and recommendations represent our professional judgement and are based on available information and accepted practices. No warranty is implied or expressed beyond this.



Zach Peterson, Inspector

5/23/2024

Date

Appendices

Photo Log and Observation Maps


On-Site Photographs

Oliver Wind IV 345kV Transmission Line Project- Oliver and Mercer Counties

<p>NE 30 60 90 E 120 SE 150 S 180 210</p> <p>☉ 115°SE (T) LAT: 47.168805 LON: -101.489027 ±9ft ▲ 2157ft</p>  <p>10 May 2024, 10:02:22</p>	<p>Photo #: 1</p> <p>Direction: Southeast</p> <p>Description: Dozer and scraper stripping topsoil for substation.</p> <p>Observer: Zach Peterson</p> <p>Date: 05/10/2024</p> <p>Latitude: 47.168805</p> <p>Longitude: -101.489027</p>
<p>S 180 SW 210 240 W 270 NW 300 330</p> <p>☉ 256°W (T) LAT: 47.168249 LON: -101.488808 ±13ft ▲ 2154ft</p>  <p>10 May 2024, 10:03:22</p>	<p>Photo #: 2</p> <p>Direction: West</p> <p>Description: Subsoil layer starting to appear after topsoil was removed.</p> <p>Observer: Zach Peterson</p> <p>Date: 05/10/2024</p> <p>Latitude: 47.168249</p> <p>Longitude: -101.488808</p>

On-Site Photographs

Oliver Wind IV 345kV Transmission Line Project- Oliver and Mercer Counties

<p>N 0 30 NE 60 E 90 120 SE 150 S 180</p> <p>☉ 92°E (T) LAT: 47.168228 LON: -101.488784 ±13ft ▲ 2149ft</p>  <p>10 May 2024, 10:03:25</p>	<p>Photo #: 3</p> <p>Direction: East</p> <p>Description: Dozer and Scraper pushing stripped topsoil into piles on east end of substation site.</p> <p>Observer: Zach Peterson</p> <p>Date: 05/10/2024</p> <p>Latitude: 47.168228</p> <p>Longitude: -101.488784</p>
<p>N 330 0 30 NE 60 E 90 120 SE 150</p> <p>☉ 60°NE (T) LAT: 47.168154 LON: -101.487795 ±13ft ▲ 2143ft</p>  <p>10 May 2024, 10:04:30</p>	<p>Photo #: 4</p> <p>Direction: Northeast</p> <p>Description: Topsoil piles on east end of substation site.</p> <p>Observer: Zach Peterson</p> <p>Date: 05/10/2024</p> <p>Latitude: 47.168154</p> <p>Longitude: -101.487795</p>



On-Site Photographs

Oliver Wind IV 345kV Transmission Line Project- Oliver and Mercer Counties

 <p>☉ 256°W (T) LAT: 47.168131 LON: -101.486574 ±13ft ▲ 2151ft</p>  <p>10 May 2024, 10:06:29</p>	<p>Photo #: 5</p> <p>Direction: West</p> <p>Description: Topsoil stripped to depth of subsoil with silt fence running along south side of site.</p> <p>Observer: Zach Peterson</p> <p>Date: 05/10/2024</p> <p>Latitude: 47168131</p> <p>Longitude: -101.486574</p>
 <p>☉ 4°N (T) LAT: 47.168156 LON: -101.488348 ±13ft ▲ 2142ft</p>  <p>10 May 2024, 10:08:13</p>	<p>Photo #: 6</p> <p>Direction: North</p> <p>Description: Dozer and scraper working in tandem to remove topsoil to depth of subsoil layer appearing.</p> <p>Observer: Zach Peterson</p> <p>Date: 05/10/2024</p> <p>Latitude: 47.168156</p> <p>Longitude: -101.488348</p>

On-Site Photographs



Oliver Wind IV 345kV Transmission Line Project- Oliver and Mercer Counties

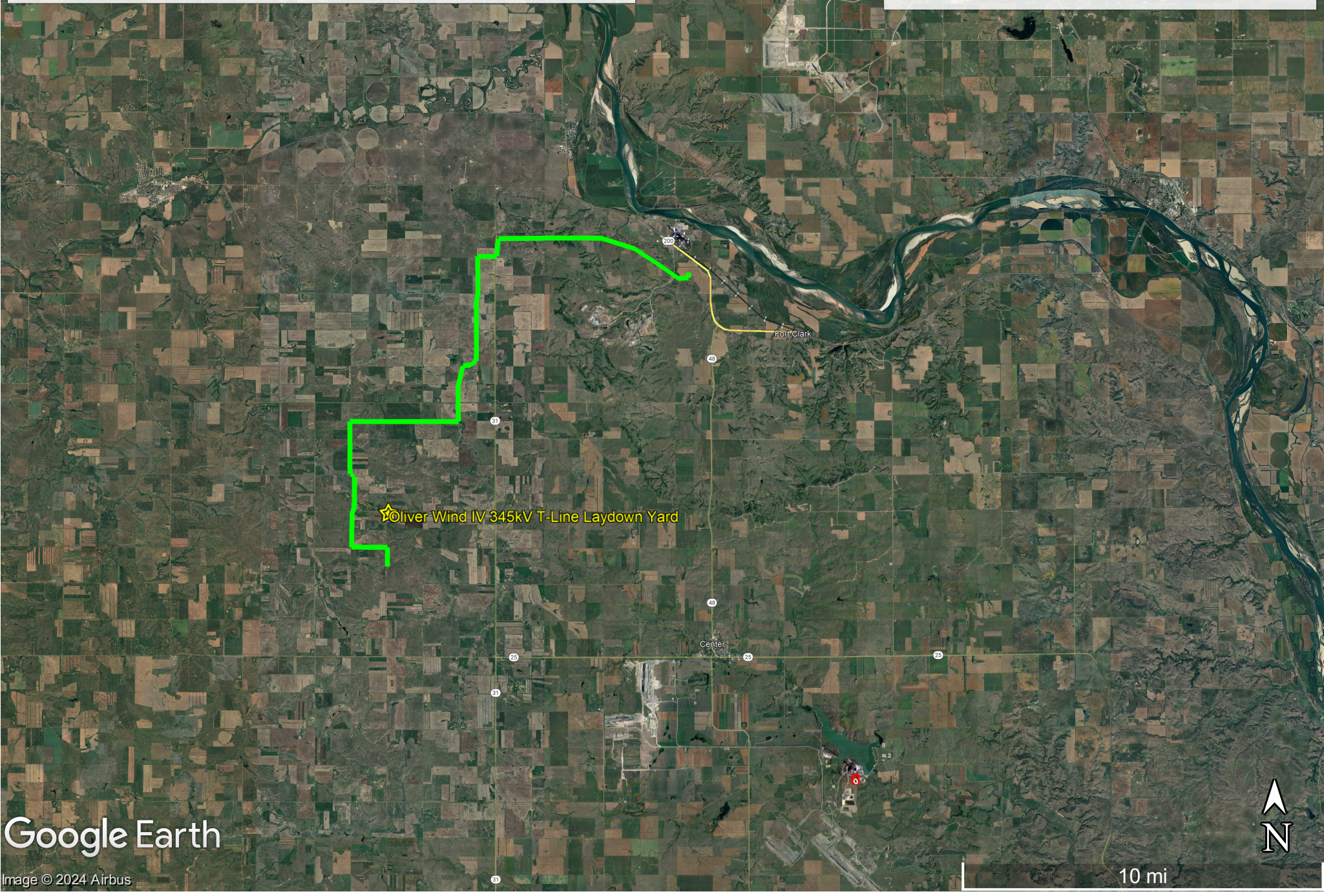
	<p>Photo #: 7</p> <p>Direction: Southwest</p> <p>Description: Topsoil piles and silt fence running along south side of substation site.</p> <p>Observer: Zach Peterson</p> <p>Date: 05/10/2024</p> <p>Latitude: 47.168152</p> <p>Longitude: -101.488841</p>
	<p>Photo #: 8</p> <p>Direction: Southeast</p> <p>Description: Dozer and Scraper moving northward stripping topsoil from substation site.</p> <p>Observer: Zach Peterson</p> <p>Date: 05/10/2024</p> <p>Latitude: 47.168727</p> <p>Longitude: -101.489184</p>

Oliver Wind IV 345kV Transmission Line

PU-23-318
Topsoil Inspection Location Map

Legend

-  Oliver Wind IV 345kV T-Line
-  Oliver Wind IV 345kV T-Line Laydown Yard



Google Earth

Image © 2024 Airbus

10 mi

