

**Site/Project Location:** Emmons-Logan Wind Energy Center

**Dates of Inspection:** May 16 & 29, 2019

Keitu staff visited the Emmons-Logan Wind Energy project for a topsoil inspection. These inspections are for both the Wind Energy Center and the Transmission Line since it is the same construction crew removing topsoil for both projects. Inspections of the construction sites are focused on (1) confirming surface disturbance/work occurring within North Dakota PSC-approved work corridor and/or route; (2) topsoil segregation occurring; (3) vegetation removal consistent with Tree & Shrub Mitigation Plan.

### **Observed Work / Weather Conditions**

#### **May 16<sup>th</sup>**

Visit occurred between 8:00am and 9:00am. The weather was clear and sunny, temperature at 45°F, winds at 15-20 mph out of the north and no precipitation.

The Emmons-Logan Wind Energy Center project kicked off its construction at the time of the visit. One grader started stripping topsoil for the laydown yard. The laydown yard is located on the SW ¼ of Section 34, Township 134N, Range 74W at the intersection of 22<sup>nd</sup> St. SE and 72<sup>nd</sup> Ave SE in Emmons County, North Dakota.

#### **May 29<sup>th</sup>**

Visit occurred between 9:00am and 11:00am. The weather was clear and partly cloudy, temperature at 65 °F, winds at 10-15 mph out of the northwest and no precipitation.

Equipment operators and machinery departed the laydown yard at 8:30am and arrived on the construction site at 9:00am. The site location for the inspection is located on the N ½ N ½ of Section 13, Township 134N, Range 74W on the south side of 68<sup>th</sup> St SE in Emmons County, North Dakota.

### **Top Soil Management / Condition / Erosion Control / Stormwater Management**

#### **May 16<sup>th</sup>**

Grader stripped the topsoil for the laydown yard, adjacent to 72<sup>nd</sup> Ave SE. Grader operator was informed topsoil depth was 4-6 inches deep in the area where the laydown yard was located. The grader operator removed topsoil to a depth where subsoil appeared and bulldozers were going to level the remaining drift rows of topsoil after completing topsoil removal of the laydown yard. The area of the laydown yard was previously a cultivated field. Topsoil depth at the laydown yard was not deeper than 12 inches. The operator was careful to remove topsoil to a depth where subsoil started to appear. All topsoil removed from laydown yard was placed on the west side of the site. The operators of the grader demonstrated a proper understanding of the rules and regulations for topsoil removal.

#### **May 29<sup>th</sup>**

A grader and bulldozer were used on the construction site to strip topsoil for an access road from 68<sup>th</sup> St SE to the pad area for the where a wind turbine will be constructed. The grader and bulldozer operators were the same individuals that had performed the topsoil stripping at the laydown yard during the initial inspection and demonstrated an adequate understanding of the rules and regulations for topsoil removal and proficiency to perform the task properly. The bulldozer was used to strip the topsoil for the access road while the grader was

simultaneously stripping topsoil for the turbine pad. The access road was constructed on fairly level ground and subsoil was reached at depths between 8-12 inches. The turbine pad was located in mostly flat area of the field with exception of a small portion of a moderate sloping hillside. Subsoil on the pad location was reached at a depth of 6-8 inches for the majority of the site, and the portion located on the hillslope was noticeably shallower with subsoil being reached at depths between 3-4 inches. Topsoil depth was less than 12 inches for both the access road and turbine pad. The grader and bulldozer operators piled the topsoil in a row to one side of the road and the outer edges of the turbine pad. Both equipment operators confirmed that the topsoil piles would be segregated from other surface material until construction was completed and the topsoil would be returned to pre-construction condition.

### **Vegetation Condition**

No evidence of tree or shrub removal was noted as both project site locations inspected were currently used for crop production.

### **Deficiencies**

Deficiencies were not found at the time of inspection.

### **Actions Taken/To Be Taken**

Topsoil segregation was noted to be acceptable at this time in the areas observed. Equipment operator was reminded to strip soil, where it existed, down to the depth where subsoil started to appear.

Equipment operators have demonstrated proficiency in topsoil removal and segregation in compliance with the Commission's Order.

**Keitu Inspectors:** JLA, ZAP

**Inspection Report Submitted:** 6 June 2019

**Report Photo #1 "Stripping Layout Yard"**



**Report Photo #2 "Start of Topsoil Pile"**



**Report Photo #3 "Subsoil Showing in Laydown Yard"**



**Report Photo #4 "Access Road with Topsoil Piled to the Side"**



**Photo Location Map**



**Site Location Map**

