



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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March 29, 2019

Mr. Darin Kearney
Public Utilities Commission
500 E Capitol
Pierre, SD 57501

Subject: Response to PUC's Request for DENR Comment on Deuel Harvest North Wind Farm

Dear Mr. Kearney:

The following is the Department of Environment and Natural Resource's response to the questions contained in your March 26, 2019 letter to Brian Walsh, with the DENR's Ground Water Quality Program.

PUC Questions followed by DENR's response:

- 1) the potential adverse impacts to the environment due to oil and chemical spills used during wind turbine construction or operation;
 - a. *The Department of Environment and Natural Resources has rules and regulations (SDCL 34A-12 and ARSD 74:34:01) which require the reporting, assessment and cleanup of oil and chemical spills that may occur during the construction or operation of wind farms.*
 - b. *Previously reported oil spills from operating wind farms have been minor and were easily addressed. Based upon the quantity of oil and chemicals present at these sites, it does not appear that these sites pose a significant oil or chemical risk to ground water.*
- 2) the potential for the project to contaminate, disrupt the flow, or disturb aquifers/springs due to the concrete in wind turbine foundations;

The department does not consider a concrete foundation to be a source of ground water contamination. Foundations will not be constructed in any major aquifer.

- 3) the potential for the project to contaminate, disrupt the flow, or disturb aquifers/springs during construction of the project;

Based upon the depth and spacing of the concrete wind turbine foundations and the depth of the aquifer, construction of the wind farm will not contaminate or cause disruption of ground water flow, nor a disturbance of the aquifer underlying the site.

- 4) the potential for the project to contaminate, disrupt the flow, or disturb aquifers/springs during wind turbine operation as a result of ground vibration; and

Based upon the depth of the aquifer and spacing of the wind turbines, vibrations from the towers will not contaminate and are unlikely to cause disruption of ground water flow, nor a disturbance of the aquifer underlying the site.

- 5) the request for a hydrogeological study to demonstrate that aquifers/springs will not be adversely impacted by the construction or operation of the project.

Previous geological studies performed by DENR and the United States Geological Survey to map the ground water resources have shown that the major aquifer in this area is greater than 100 feet deep. Therefore, the construction and operation of the wind farm will not impact the major aquifer under this wind farm.

Sincerely,



Kim McIntosh, Administrator
Ground Water Quality Program
Department of Environment and Natural Resources