BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION OF WILD SPRINGS SOLAR, LLC FOR AN ENERGY FACILITY PERMIT FOR THE WILD SPRINGS SOLAR PROJECT

SD PUC DOCKET EL 20-___

DIRECT TESTIMONY OF BRIE ANDERSON
ON BEHALF OF WILD SPRINGS SOLAR, LLC

May 15, 2020

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name, employer, and business address.

A. My name is Brie Anderson. I am employed at Merjent, Inc. ("Merjent"), 1 Main Street SE, Suite 300, Minneapolis, Minnesota 55414.

Q. Briefly describe your educational and professional background and duties.

A. I have a Bachelor of Science degree in ecology and field biology with a wildlife emphasis and a Master of Science degree in Geographic Information Systems for Natural Resources. I have more than 12 years of experience permitting various infrastructure projects at the federal, state, and local levels. A copy of my resume is attached as Exhibit A5-1.

Q. What is Merjent's role with respect to the Wild Springs Solar Project ("Project")?

A. Merjent is providing environmental permitting support on the Project.

Q. Describe your familiarity with the Project.

A. I have been working on the Project since September 2019. I have managed or authored the environmental chapters of the Facility Permit Application ("Application"), reviewed environmental survey data for the Project, conducted desktop data analysis for the Project, and assisted with layout modifications to avoid and minimize impacts to environmental resources.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your Direct Testimony?

A. The purpose of my Direct Testimony is to provide information concerning existing environmental conditions in the area of the proposed Project, potential impacts of the Project on the existing environment, and how the Project will avoid, minimize, or mitigate potential impacts.

Q. What sections of the Application for the Project are you sponsoring?

A. I am sponsoring the following sections of the Application:

- Section 9.1: Effect on Physical Environment
- Section 9.2: Effect on Hydrology
- Section 9.3.1: Vegetation
- Section 9.3.2: Noxious and Invasive Species
- Section 9.3.4: Federally Listed Species
- Section 9.3.5: State-listed Species
- Section 9.4: Effect on Aquatic Ecosystems
- Section 9.5.1: Land Use and Ownership
- Section 9.5.2: Recreation
- Section 9.5.4: Visual Resources
- Section 9.6: Air Quality
- Section 9.7.1: Socioeconomics
- Section 9.7.2: Community Facilities and Services
- Section 9.7.3: Commercial, Industrial, and Agricultural Sectors
- Section 9.7.5: Cultural Resources
- Appendix A: Agency Correspondence
- Appendix C: Vegetation Management Plan
- Appendix E: Wild Springs Solar Flow Direction Map
- Appendix F: Wetland Delineation Report
- Appendix I: Visual Renderings

III. ENVIRONMENTAL SITE ANALYSIS OVERVIEW

Q. Please describe the existing geological resources, seismic risks, and subsidence potential in the Land Control Area (as defined in the Application).

A. A discussion of existing geological resources is provided in Section 9.1.1 of the Application. With respect to seismic risks, the risk of seismic activity in the

vicinity of the Land Control Area is low, and there are no active or inactive faults in the vicinity of the Project. The potential for subsidence within the Land Control Area is negligible. Wild Springs is not aware of any documented historic underground mining operations in the vicinity of the Project.

Q. What steps will Wild Springs take to avoid, minimize, and/or mitigate potential impacts to geologic resources?

A. Wild Springs will conduct geotechnical borings within the Land Control Area prior to construction to gather site-specific depth to bedrock information. If the depth to bedrock is less than the depth required for traditionally installing the steel pier tracking rack system, Wild Springs will utilize alternative engineering solutions, such as helical screws. Because of the limited potential for large, seismically induced ground movements, there is minimal risk of earthquake-related impacts on the Project. No additional mitigation beyond designing the Project to currently accepted industry specifications would be required.

Q. Please describe the existing soil resources in the Land Control Area.

A. A discussion of soil resources is provided in Section 9.1.2 of the Application. Impacts to soils will occur during the construction and decommissioning stages of the Project. Construction may require some amount of grading to provide a more level surface for the solar arrays. Additional soil impacts during construction may come from the installation of the direct-embedded piers that support the structural framework of the solar arrays, and small areas of foundations for the inverter skids, the Project Substation, electrical collection lines, and the operations and maintenance facility.

Q. What steps will Wild Springs take to avoid, minimize, and/or mitigate potential impacts to soil resources?

A. Wild Springs will implement various best management practices ("BMPs") during construction and restoration to minimize impacts to soil, including separating topsoil and subsoil and installing temporary erosion control devices as

appropriate. In addition, recent research indicates there could be some net benefits to soil resources over the lifecycle of the Project as compared to existing uses, such as reducing storm water runoff and incorporating native plants that improve the soil with organic matter. Additional detail concerning these benefits and proposed mitigation measures are included in Section 9.1.2.3 of the Application.

Q. Please describe the hydrologic resources, including surface and underground resources, present within the Land Control Area?

A. As set forth in Section 9.2 of the Application, Wild Springs analyzed the following types of hydrologic resources with respect to the Project:

- Hydrogeology resources: The principal aquifers within the Land Control Area listed are the Deadwood, Madison, Minnelusa, Minnekahta, and Inyan Kara aquifers. The water quality is good in all aquifers. Well depth to these aquifers is typically at least 40 feet but can reach depths up to several thousand feet.

- Watersheds: The Land Control Area is located within the Cheyenne River Basin with topography that is undulating, containing several hills and saddles.

- Waterbodies: Wild Springs reviewed the National Hydrography Dataset ("NHD") and identified one NHD basin and seven intermittent waterbodies within the Land Control Area. Wild Springs also conducted an analysis of drainage areas in the Project. Several upland swales and ephemeral draws dissect the Land Control Area, generally flowing to the north and east off-site towards Boxelder Creek.

- Wetlands: Wild Springs conducted wetland delineations in the Land Control Area; there are three wetland types and 9.5 acres of wetlands in the Land Control Area. Wild Springs submitted the 2017 wetland delineation of the initial 1,000-acre Land Control Area to the U.S. Army Corps of Engineers ("USACE"), and the USACE issued a jurisdictional determination ("JD") concurring with the wetland delineation on August 24, 2017. Wild Springs conducted a second wetland delineation in the portion of the expanded Land Control Area not previously surveyed in late 2019, which was also submitted to the USACE. On March 18, 2020, the USACE issued a JD for all wetlands and waterbodies within the 1,643 acres surveyed, including the 1,499-acre Land Control Area.

- Existing and planned water rights: Wild Springs reviewed the South Dakota Department of Environment and Natural Resources ("SDDENR") Water

Rights, Location Notices, and Well Completion Report databases to identify where there are existing water uses within the Land Control Area. There is one Water Rights Permit, one Location Notice, and two wells in the Land Control Area.

- Based on a review of SDDENR's Pending Applications to Appropriate Water and Future Use Reviews, there are no pending water right applications in Pennington County.

- Floodplains: There are 135.2 acres of the 2013 Federal Emergency Management Agency 100-year floodplains within the Land Control Area associated with Boxelder Creek.

- National Park Service Nationwide Rivers Inventory ("NRI"): There are no NRI-listed rivers within the Land Control Area. The closest NRI segment is the Cheyenne River approximately 16 miles southeast of the Land Control Area.

- Impaired waters: There are no impaired waters within the Land Control Area.

Q. What measures will Wild Springs take to avoid, minimize, and/or mitigate potential impacts to hydrologic resources?

A. Wild Springs has conducted formal wetland and waterbody delineations within the Land Control Area and received a JD for the wetland and waterbody boundaries. As discussed in Section 9.2.2.3 of the Application, the preliminary Project design minimizes impacts to wetlands. The Project will also avoid impacts to existing and planned water rights. Where collection lines for the solar facility cross waterbodies, collection lines will either be bored or a Nationwide Permit ("NWP") for dredge and fill within waters of the U.S. under Section 404 of the Clean Water Act will be utilized. Some access roads for the Project will cross waterbodies and Wild Springs will install culverts in these locations to maintain water flow; therefore, impacts on waterbodies will be minimal. Wild Springs anticipates waterbody impact thresholds will fall under a NWP. Wild Springs will also develop and implement a Stormwater Pollution Prevention Plan. Construction dewatering will be conducted in accordance with the General Permit for Temporary Discharge Activities (Permit No.: SDG0700000) and Temporary Permit to Use Public Waters from the SDDENR and through the implementation of industry-accepted BMPs to minimize sediment withdrawal during dewatering

activities and erosion and sediment release at the discharge point. These and other mitigation measures are discussed in Section 9.2.3 of the Application.

Q. Please describe the vegetation present in the Land Control Area.

A. The majority of the Land Control Area is herbaceous (75.5 percent) and cultivated cropland (21.4 percent). These lands are bisected by roads and transmission lines. The herbaceous land includes pasture, hay, and fallow grassland areas; cattle appear to have seasonal access to graze these areas, and much of these areas appear to be hayed. The cultivated cropland in the Land Control Area is predominantly used to produce annual crops such as alfalfa, hay, and wheat. Additional information is provided in Section 9.3 of the Application.

Q. How will Wild Springs avoid, minimize, and/or mitigate impacts to vegetation?

A. Wild Springs developed a Vegetation Management Plan that will be used during restoration and ongoing operation of the Project. Wild Springs has developed two seed mixes that could be used for revegetation, depending on the management style of grazing or mowing. A third seed mix, a wet mix, would be used in limited areas in either management scenario. Seed mixes are designed to be native, blend with the surrounding landscape, and were developed in coordination with the Natural Resources Conservation Service to achieve Wild Springs' goals for operating the solar facility, establish stable ground cover successfully, reduce erosion, reduce runoff, and improve infiltration. In addition, because the Land Control Area is currently bisected by roads and transmission lines, the Project is not anticipated to have significant impacts with respect to habitat fragmentation.

Q. Are there noxious weeds and/or invasive species in the Land Control Area and, if so, what mitigation measures will be employed by Wild Springs?

A. Yes. Thirteen listed species of noxious weeds have the potential to occur and are regulated within Pennington County, and Wild Springs recorded incidental observations of noxious weeds (Canada thistle) within the Land Control Area. The Project's Vegetation Management Plan outlines noxious weed control measures that Wild Springs will implement, and Wild Springs will utilize a seed mix for restoration that is free of noxious and invasive weeds. These and other mitigation measures are described in Section 9.3.2.3 of the Application.

Q. Are any federally-listed or state-listed species present within the Land Control Area?

A. There is a potential for certain federally-listed species to occur within the Land Control Area, including: northern long-eared bat, rufa red knot, whooping crane, and interior least tern. No state-listed threatened or endangered species have been documented within the Land Control Area; one species of greatest conservation need, burrowing owl, has been incidentally observed during the migration season. Although prairie dog colonies are present within the Land Control Area, and the state-listed swift fox and black-footed ferret and burrowing owl sometimes live in prairie dog burrows, Wild Springs has re-designed its layout to avoid the 2019 mapped extent of the colonies and committed to fencing and vegetation management to try to minimize the expansion of those colonies. Wild Springs anticipates no impacts on federally- or state-listed species due to Project construction and operations due to the low likelihood or frequency of species presence in the Land Control Area and implementation of species-specific conservation measures, as appropriate. Sections 9.3.4 and 9.3.5 of the Application include additional discussion of federally-listed and state-listed species.

Q. Are aquatic resources present in the vicinity of the Project and, if so, what measures will Wild Springs take to avoid, minimize, and/or mitigate potential impacts?

A. As discussed in Section 9.4 of the Application, all streams in the Land Control Area are intermittent, and the majority of wetlands are emergent wetlands that are only temporarily or seasonally flooded; therefore, fishery habitat is not present. No lake habitat exists within the Land Control Area. As such, Wild Springs does not anticipate impacts to aquatic ecosystems.

Q. Please provide a general overview of the Land Control Area from a land use perspective.

A. As discussed in Section 9.5.1 of the Application, the Land Control Area is located within the General and Limited Agricultural Zoning Districts in Pennington County and includes primarily land classified as herbaceous and cultivated crops.

Q. What steps will Wild Springs take to avoid, minimize, and/or mitigate impacts to the existing land uses?

A. The Project has been designed to be compatible with the applicable zoning requirements in Pennington County and adjacent agricultural uses. Additional details are included in Section 9.5.1.3 of the Application.

Q. Will the Project impact recreational opportunities?

A. No. There are no recreational areas within the Land Control Area.

Q. Please discuss the Project's potential impacts on visual resources.

A. Most of the Project facilities, including the solar arrays, will be low-profile, up to 20 feet in height, as compared to the many existing transmission structures in the Project vicinity that range in height from approximately 80 to 130 feet tall. The Project substation will be of similar vertical profile as the existing New Underwood Substation within the Land Control Area. The solar arrays will be visible from adjacent roadways and parcels but, given their relative low profile and the fact that all the facilities will be fenced for security, they will not be visible from long distances. Wild Springs has completed visual renderings from various locations in the Land Control Area. In addition, as discussed in the Direct

Testimony of Jay Hesse, Wild Springs is coordinating with the owners of the closest residence to the Land Control Area to address their concerns regarding the Project's potential aesthetic impacts. Details regarding the Project's visual renderings and further discussion regarding visual resources are included in Section 9.5.4 of the Application.

Q. Is the Project anticipated to impact existing air quality?

A. No. As discussed in Section 9.6 of the Application, the Project is not anticipated to have material impacts on existing air quality.

Q. With respect to cultural resources, what steps has Wild Springs taken to identify cultural resources within the Land Control Area?

A. As discussed in Section 9.7.5.1 of the Application, Wild Springs hired Area M Consulting ("Area M") to conduct a Level I Records Search of the Land Control Area, and an additional one-half mile radius around the Land Control Area. Area M conducted the background research in 2017 and 2019 to identify previously recorded archaeological and historic architectural resources and previous investigations. Following the background research, Area M conducted a Level III Inventory in 2017 and 2019 to identify any additional cultural resources that may be present within the Land Control Area. One previously unrecorded archaeological site was identified during pedestrian survey. As discussed in the Direct Testimony of Melissa Schmit, Wild Springs adjusted the Project design to avoid this site, as well as to provide a 50-foot buffer.

Q. What steps will Wild Springs take to avoid, minimize, and/or mitigate impacts to cultural resources?

A. As discussed in Section 9.7.5.3 of the Application, the Project has been designed to avoid impacts to cultural resources. In a letter dated April 21, 2020, the South Dakota State Historic Preservation Office concurred with Area M's recommendation that the Project would not affect historic properties listed in or eligible for listing in the National Register of Historic Places. Wild Springs will

prepare an Unanticipated Discoveries Plan that will outline the steps to be taken if previously unrecorded cultural resources or human remains are encountered during construction.

IV. CONCLUSION

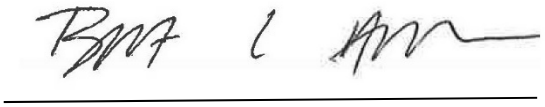
Q. Based on the analysis Wild Springs has conducted, has the Project been sited so as to minimize human and environmental impacts?

A. Yes. As discussed above and throughout the Application, the Project is not anticipated to have any significant long-term effects on humans or the environment. Wild Springs has committed to complying with all applicable regulatory and permit requirements, implementing resource-specific minimization and mitigation measures, and utilizing BMPs during construction, restoration, and operation.

Q. Does this conclude your Direct Testimony?

A. Yes.

Dated this 15th day of May, 2020.



Brie Anderson

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