CROWLEY | FLECK PLLP
ATTORNEYS

Brian R. Bjella
100 West Broadway, Suite 250
P.O. Box 2798
Bismarck, ND 58502-2798
701.223.6585
bbjella@crowleyfleck.com

June 19, 2014

VIA HAND DELIVERY

Mr. Darrell Nitschke
Executive Secretary
North Dakota Public Service Commission
600 E. Boulevard, Dept. 408
Bismarck, ND 58505-0480

RE: North Dakota Pipeline Company LLC, Sandpiper Project – Siting Application
Case No. PU-13-848

Dear Mr. Nitschke:

Enclosed for filing are an original and ten (10) copies of the following:

1. Supplement to Late Filed Exhibit No. 5.

An electronic copy of the same has also been filed with the Commission via e-mail.

Please call should you have any questions.

Sincerely,

Stephanie Dassinger,
on behalf of Brian R. Bjella

cc: Mitch Armstrong
Brian Schmidt
Julie Prescott

Sandpiper Pipeline Project – Siting Application
Case No. PU-13-848

North Dakota Pipeline Company LLC's Supplement to Late Filed Exhibit No. 5

June 19, 2014

During the working session held by the North Dakota Public Service Commission ("Commission") on June 10, 2014, regarding North Dakota Pipeline Company LLC's ("NDPL") Application for a Certificate of Corridor Compatibility and Route Permit for the Sandpiper Pipeline Project ("Project"), the Commission requested that NDPL provide information regarding its reasons for selecting the proposed route in the Devils Lake area, and the potential for routing the Project in the approximately 4 mile area between the proposed route and the City of Cando in the Devils Lake area, particularly above the 1462' elevation.

With respect to the proposed route in the Devils Lake area, NDPL selected the route because it does not cross any exclusion or avoidance areas, and satisfies the other siting criteria set forth in North Dakota Century Code, Ch. 49-22 and North Dakota Administrative Code, Section 69-06-08-02. In addition, the proposed route provides the most direct route, while avoiding population centers (including the Cities of Maza and Cando), existing water features (e.g., Lake Alice, Lake Irvine, Dry Lake and Hurricane Lake), the majority of the Devils Lake Basin, a number of waterfowl production areas located just north of Cando, a federal wildlife refuge located south of the proposed route, and United States Fish and Wildlife Service ("USFWS") grassland and wetland easements. Of the approximately 15.3 miles of the proposed route that cross the Devils Lake Basin, only half are located below the 1458' elevation. In the Devils Lake area, NDPL has acquired easements from all but one of the landowners crossed by the proposed route, and NDPL is negotiating with and anticipates acquiring an easement from the remaining landowner in the near future.

Utilizing the proposed route will not negatively impact NDPL's operation, maintenance or emergency response capabilities for the Devils Lake area segment of the Project, even in the event that Devils Lake reaches the 1462' elevation. NDPL, and its parent company, Enbridge, currently operate pipelines located under waterbodies, including the Line 81 Pipeline, and are experienced with appropriately designing and constructing pipelines for the site-specific conditions. In this case, NDPL has conducted extensive, detailed design work specifically for the Devils Lake area. Even though the preferred route is not located within a lake, and the route intentionally avoids a lake crossing by staying north of existing lakes, NDPL has designed and will construct the Project to account for the possibility that Devils Lake could reach an elevation exceeding 1462'. NDPL will install buoyancy control measures (either set-on weights or concrete coated pipe) along the portion of the pipe below the 1458' elevation, even in areas that are not wet during construction and even though such buoyancy control measures are not necessary based on engineering studies of the soil structure (*see* Section 1 of the Sandpiper Pipeline Project Design Summary – Devils Lake Area, filed on May 23, 2014, and NDPL's Supplement to Late Filed Exhibit No. 5, filed on June 6, 2014). In addition, the valve placement near the Devils Lake area is appropriate in the event Devils Lake rises above either the 1458' or 1462' elevation, and complies with the United States Department of Transportation, Pipeline and Hazardous Materials Safety Administration's ("PHMSA") regulations set forth in 49 Code of Federal Regulations ("CFR") 195 (*see* Exhibit A to NDPL's Supplement to Late Filed Exhibit No. 5, filed on June 6, 2014).

Likewise, even if the pipeline were underwater at some point in the Devils Lake area, NDPL would be able to employ the same inspection and monitoring tools as are used for the remainder of the Project, such as a cathodic protection system to protect the pipeline against external corrosion, in-line

monitoring technology to identify internal anomalies in the pipeline, and a supervisory control and data acquisition ("SCADA") system to remotely monitor the pipeline to detect and address operational anomalies. As indicated in previous filings, the ground bed locations of the cathodic protection system have been specifically selected to account for the potential rise in the elevation of Devils Lake (*see* Section 3.1 of the Sandpiper Pipeline Project Design Summary – Devils Lake Area, filed on May 23, 2014, as a supplement to Late Filed Exhibit No. 5). Should maintenance of an underwater section of the pipeline be required, NDPL can utilize site-specific construction methods that protect the environment, as well as ensure safe access to the pipeline.

In the unlikely event of a release, NDPL has trailers containing emergency response equipment strategically located at NDPL's manned facilities, and has conducted extensive emergency response training for its employees, as well as emergency response personnel located along the Project route (*see* NDPL's Supplement to Late Filed Exhibit No. 5, filed June 6, 2014, including Exhibits B and C). NDPL's response would not be hindered if the pipeline were underwater, and specific emergency response protocols have been developed for underwater releases (*see* NDPL's Supplement to Late Filed Exhibit No. 5, filed June 6, 2014, including Exhibits B and C). In addition, the risk of a release reaching the main body of Devils Lake is low, since, unlike a river, the water over the pipeline would not be moved by a current, a release would remain more localized, and NDPL would have more time to contain and recover a release.

With respect to routing the Project above the 1462' elevation in the area between the City of Cando and the proposed route, based on a desktop environmental analysis, it may be possible to route the Project mostly, but not entirely, above the 1462' elevation (one area below 1462' extends north of the City of Cando). However, additional analysis would be needed to determine whether a particular route would comply with all exclusion area and avoidance area criteria. For instance, consultation with the United States Department of Defense would be required to determine whether intercontinental ballistic missile ("ICBM") launch or launch control facilities are in proximity to a specific route. Likewise, field surveys would be required to determine whether cultural resources would be crossed by a particular route, and whether homes and businesses within the area would be located within 500 feet of a route (homes and/or businesses have been identified in the area where such a route would need to be located).

NDPL estimates that a route located above the 1462' elevation through the Devils Lake area would be at least 25 miles long, an increase of approximately 6 miles over the proposed route (using estimated start and end points for re-routing, the same segment of the proposed route would be approximately 19 miles long). Due to similarities in the terrain and water table levels throughout the Devils Lake area, it is anticipated that the increased route length would result in crossing more waterbodies and wetlands, compared to the proposed route. In addition, since NDPL would still encounter saturated soils and ground water, the same buoyancy control and valve placement measures would be employed as are planned for the proposed route. Consultation with the USFWS would also be required to determine whether USFWS grassland and wetland easements (known to be present within the area analyzed) would be crossed by a specific route.

Based on data from the United States Geological Survey ("USGS"), the potential risk of the proposed route being underwater is minimal. According to Devils Lake stochastic simulation model runs conducted by the USGS, the probability that Devils Lake flood elevation will exceed 1458' in the next 16 years is 10 percent, and the probability that the elevation will exceed 1461' is 1 percent (*see* the attached **Exhibit A**). Thus, the probability that the Devils Lake elevation will exceed 1458' is small, and the USGS probability modeling does not even show the lake level exceeding the 1462' elevation.

Notably, the current elevation of Devils Lake is approximately 1453.4 – lower than the 90 percent probability level for 2014 in the USGS modeling (*see* the Devils Lake monitoring station data provided on the USGS website, and the Devils Lake elevation data provided on the National Weather Service's Advanced Hydrology Prediction Service website). Moreover, even if portions of the proposed route did flood, it is NDPL's understanding that the elevated water levels would be intermittent and temporary. Even if the water lever were permanent, as discussed above, NDPL has no concerns with operating a pipeline underwater, and could do so in compliance with applicable state and federal regulations.

While the benefits of routing the Project (mostly) above 1462' would be minimal, doing so would have significant negative impacts. Such a re-route would cross approximately 25 miles of property not currently crossed by the Project, owned by up to 100 new landowners, who may or may not be in favor of a re-route. An additional public hearing would be required after a specific route was identified and analyzed to provide the public generally, and the new landowners in particular, with an opportunity to comment on the new route, which adds at least 1-2 months to the permitting schedule. Additionally, such a re-route would increase the length of the Project, which would increase the amount of land impacted, including waterbodies and wetlands. In total, the cost to construct the additional pipeline miles, and to acquire new easements for a new route, would be approximately $21.5 million more than the cost of the proposed route.

For the reasons noted above, NDPL respectfully requests that the Commission approve the route as proposed.

Exhibit A

Cumulative flood elevations for Devils Lake for 2012–30, based on USGS stochastic model runs made Sept. 14, 2011.

Year	*Cumulative exceedance probability, in percent						
	90	50	20	10	5	2	1
2012	1454.1	1454.8	1455.9	1456.8	1457.6	1458.6	1459.3
2013	1454.1	1455.0	1456.3	1457.5	1458.7	1459.8	1460.5
2014	1454.2	1455.0	1456.6	1457.9	1459.2	1460.3	1461.1
2015	1454.2	1455.1	1456.7	1458.1	1459.3	1460.4	1461.2
2016	1454.2	1455.1	1456.8	1458.3	1459.4	1460.5	1461.3
2017	1454.2	1455.1	1456.9	1458.4	1459.5	1460.6	1461.4
2018	1454.2	1455.1	1456.9	1458.5	1459.5	1460.6	1461.4
2019	1454.2	1455.1	1456.9	1458.6	1459.6	1460.7	1461.4
2020	1454.2	1455.1	1457.0	1458.6	1459.6	1460.8	1461.5
2025	1454.2	1455.2	1457.1	1458.8	1459.7	1460.9	1461.6
2030	1454.2	1455.2	1457.2	1458.9	1459.7	1461.0	1461.7

*Cumulative exceedance probability is the percent chance of exceeding a given lake level anytime during or before the specified year

Initial conditions for model runs:

Lake level on Sept. 13, 2010: 1,453.8
Estimated inflow to the lake, Sept. 2010: 5,400 acre-feet
Above normal precipitation assumed for October 2011 through March 2012

Based on Devils Lake stochastic simulation model described in USGS Scientific Investigations Report 2011–5050, "Simulation of Effects of Devils Lake Outlet Alternatives on Future Lake Levels and Downstream Water Quality in the Sheyenne River and Red River of the North" (http://pubs.usgs.gov/sir/2011/5050/)

NOTE – Assumptions regarding State outlet:

1) Outlet capacity 250 cubic feet per second from existing west-end outlet; additional 350 cubic feet per second from outlet being constructed from East Devils Lake (starting June 1, 2012).
2) Operating constraints: 800 cfs channel capacity and 750 mg/L sulfate concentration in the upper Sheyenne River, 750 mg/L sulfate concentration for outflow from Lake Ashtabula.
3) Operating window April 1 to November 30

U.S. Geological Survey
North Dakota Water Science Center

USGS
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