

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE)
APPLICATION OF DAKOTA) HP14-002
ACCESS, LLC FOR AN ENERGY)
FACILITY PERMIT TO CONSTRUCT)
THE DAKOTA ACCESS PIPELINE)
PROJECT)

DIRECT TESTIMONY OF

CHUCK FREY

ON BEHALF OF

DAKOTA ACCESS, LLC

DAKOTA ACCESS EXHIBIT 4

July 6, 2015

1 **Q. Please state your name and business address for the record.**

2 A. My name is Chuck Frey. I am employed by Energy Transfer Partners and my business
3 address is 1300 Main St, Houston, TX. 77002.

4 **Q. What is your position with Dakota Access, LLC (“Dakota Access”)?**

5 A. I am the Vice President of Engineering.

6 **Q. Please briefly describe your educational experience.**

7 A. I have a Bachelor of Science Degree in Civil Engineering from Texas Tech University.

8 **Q. Please describe your duties with Dakota Access.**

9 A. I am responsible for the engineering and engineering related work activities for Dakota
10 Access.

11 **Q. Which sections of the application are you responsible for?**

12 A. I am responsible for sections: 10. Demand for the facility; 11. General Site Description;
13 37. Standards of Construction; 38. Line Description; 38.1. Design Capacity; 38.3. Technical
14 Specifications; 38.4.Compressor Stations; and, 38.5. Storage Facilities.

15 **Q. Describe the demand for the facility.**

16 A. Dakota Access has secured binding long-term transportation and deficiency contracts
17 from multiple committed shippers to support development of the Dakota Access Pipeline with a
18 crude oil transportation capacity of approximately 450,000 bpd, with ninety percent (90%) of the
19 transportation capacity subscribed by those committed shippers and the remaining ten percent
20 (10%) of the transportation capacity reserved for walk-up shippers. Dakota Access Pipeline’s
21 crude oil transportation capacity can be expanded to approximately 570,000 bpd if transportation
22 demand increases. Transportation service on the Dakota Access Pipeline shall be provided by
23 Dakota Access pursuant to the Interstate Commerce Act and in accordance with the rules and

24 regulations of the Federal Energy Regulatory Commission for common carrier crude oil pipeline
 25 transportation service thereunder. Subscriptions from committed shippers were obtained by
 26 Dakota Access in connection with an initial open season that ran from March 12 to May 23,
 27 2014, and an expansion open season that commenced on September 23, 2014, and concluded in
 28 mid-December of 2014.

29 **Q. Provide a general description of where the facility is located in South Dakota.**

30 **A.** The Project originates in North Dakota and enters South Dakota in Campbell County
 31 approximately 17 miles east of the Missouri River. A summary of the Project facilities in South
 32 Dakota is outlined in Table 11.0-1 below. The Project exits South Dakota as it crosses the Big
 33 Sioux River approximately 14 miles south of Sioux Falls, and continues in a southeast direction
 34 through Iowa. Approximately 274.65 miles of the 1,169-mile-long pipeline and one pump
 35 station will be constructed within South Dakota. Additionally, Dakota Access will construct
 36 aboveground appurtenances including 40 mainline valves (MLVs) and three pig launcher and
 37 receiver (L/R) facilities.

Pipeline Crossing Length (miles) / Pump Station Impact Area (acres)	County
29.17	Campbell
6.64	McPherson
36.17	Edmunds
27.88	Faulk
36.06	*Spink
30.35	Beadle

21.97	Kingsbury	38
14.26	Miner	39
18.61	Lake	40
1.72	McCook	41
26.16	Minnehaha	42
2.15	Turner	43
23.51	Lincoln	44
36.06	Spink	45

46

47 **Q. Describe all above ground facility present along the pipeline route.**

48 A. There are three types of above ground facilities:

49 Pump Station: The pump station is an above ground facility. The pump station is planned to be
50 located in southwestern Spink County, approximately seven miles southeast Redfield, South
51 Dakota. The pump station will be fenced and contain three pumps driven by electric motors, an
52 electrical and controls building, electrical substation, a surge tank with a secondary containment
53 dike, a communications tower, and parking area for station personnel. Design and construction of
54 the pump station will meet the requirements of the National Electric Code and American
55 Petroleum Institute (API) 500 and USDOT regulations at 49 CFR Part 195. Dakota Access will
56 purchase electricity for the pump station from the incumbent provider. The pump station will be
57 fully designed for remote, unmanned operation via the Pipeline Control Center or local
58 operation.

59 The pipe entering and exiting the pump station will be located underground; however, some of
60 the piping within the pump station yard (after entering and prior to exiting the pump station

61 facilities) will be aboveground.

62 Main Line Valves (MLV's): Dakota Access plans to install 40 MLVs along the route in South
63 Dakota. Approximate locations for these valves are shown in the route mapping presented in
64 Exhibits A2, A3, and A4. The MLVs will be constructed within the 50-foot permanently
65 maintained ROW, and be approximately 75-feet-long and 50-feet-wide. These valve sites will
66 be located within an easement obtained from landowners. The spacing intervals between the
67 MLVs along the ROW are based upon the location of the high consequence areas (HCAs), DOT
68 requirements and permit requirements. All valves will have remote actuators so that in the
69 unlikely event of an emergency, these valves can be quickly activated from the Pipeline Control
70 Center to isolate sections of the pipeline to minimize environmental impacts. The valves will
71 also be designed to allow for local operation.

72 Launcher/Receivers: All pipeline segments will allow the passage of internal inspection devices,
73 which are capable of detecting internal and external anomalies in the pipe such as corrosion,
74 dents, and gouges. Internal inspection of pipelines has been largely responsible for reducing
75 pipeline incident frequencies over the past decade. Pig L/Rs are designed to launch and receive
76 these internal inspection devices.

77 All pig L/Rs and MLVs will be above-ground fabricated settings which will have a design factor
78 of 0.5 and a pipe wall thickness of 0.625 inch (X-70). The L/Rs will be located along the
79 Project as identified in Exhibits A2, A3, and A4.

80 **Q. What is the design and construction standard by which Dakota Access will be built?**

81 A. The Project is being designed according to USDOT regulations at 49 CFR Part 195,
82 Transportation of Hazardous Liquids by Pipeline; the final design and construction will meet or
83 exceed all applicable standards.

84 The entire pipeline will have a design factor of 0.72. The pipeline will have a nominal 30-inch
85 diameter. Pipe material grade will be X-70 and comply with API 5L-PSL2. Pipe wall thickness
86 will be 0.429 inch (X-70) or 0.625 inch (X-70). To protect against corrosion, Dakota Access will
87 apply an external FBE coating to the pipeline and an impressed cathodic protection system will
88 be used. All material will be manufactured, constructed, and operated in accordance with
89 applicable regulations.

90 **Q.** Have you applied for any waivers from PHMSA?

91 A. No.

92 **Q.** **As proposed, does the project meet or exceed all federal and state standards?**

93 A. Yes.

94 **Q.** **What is the design capacity and design pressure?**

95 A. A process flow diagram for the South Dakota segment of the Project can be found within
96 Exhibit B. The design of the pipeline system is based on a maximum operating pressure of the
97 entire pipeline of 1,440 psig to allow a consistent maximum discharge pressure from the Project
98 pump station, optimized for efficiency at various flow rates up to system capacity. Some sections
99 will be exposed to lower pressures due to the combined pump station discharge pressure, friction
100 pressure loss and hydrostatic head gain or loss for pipe segments located at elevations that differ
101 from pump station elevation.

102 **Q.** **Does the Project include compressor stations?**

103 A. No.

104 **Q.** **Does the Project include storage facilities?**

105 A. No.

106 **Q.** **In addition, are you sponsoring any Exhibits to the Application?**

107 A. Yes, Exhibit B and Exhibit C to Application.

108 **Q. Does this conclude your testimony?**

109 A. Yes.

110

111 Dated this ____ day of July, 2015

112

113 _____

114 Chuck Frey