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

JOEY MAHMOUD

ON BEHALF OF

DAKOTA ACCESS, LLC

DAKOTA ACCESS EXHIBIT 2

EXHIBIT DAPPL 3D

- 1 Q. Please state your name, present position and business address.
- 2 A. My name is Joey Mahmoud. I am the Vice President of Engineering of Dakota Access,
- 3 LLC ("Dakota Access"), the Applicant in this proceeding, and Senior Vice President of
- 4 Engineering of Energy Transfer Partners, L.P. ("ETP"). My business address is 1300 Main
- 5 Street, Houston, Texas, 77002.

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- 6 Q. What are your duties and responsibilities as Vice President of Engineering of
- 7 Dakota Access and Senior Vice President of Engineering of ETP?
- 8 A. For Dakota Access, I am responsible for the overall technical development and execution
- 9 of the Dakota Access Pipeline Project (the "Project") as it relates to non-commercial items and I
- am ultimately responsible for the installation and preparation of the Project to go into operations.
- 11 This includes the day-to-day management of the technical professionals and experts to accurately
- and timely execute the Project from concept to design to construction and ultimately to
- 13 operations of the facilities.
- As Senior Vice President of Engineering for ETP, my role is similar in scope, but broader
- in concept. My responsibilities include the non-commercial development and execution of ETP's
- larger or more complex projects from concept to operations.
- 17 Q. Please describe your educational and professional background.
- 18 A. I received a Bachelors of Science in Animal Science from Texas A&M University in
- 19 1993 and a Masters of Agriculture in Rangeland Ecology and Management (Ecosystem
- Management) with an emphasis in Rangeland and Wetland Ecology Management from Texas
- 21 A&M University in 1996. My professional experience is centered on the transportation and
- 22 logistics of moving energy related products across the United States and project management.
- Throughout my career, my emphasis has been in project management and execution, and

leadership of projects for successful execution and deployment of development capital into energy infrastructure projects.

When I first began at Energy Transfer, I was Vice President of Regulated Projects, then Vice President of Engineering and now Sr. Vice President of Engineering Major Projects. In each of these positions, my responsibilities were for the development and execution of capital projects from concept or inception to operations.

Prior to Dakota Access and Energy Transfer, I worked for an engineering and environmental consulting firm called PBS&J where my responsibilities included the routing and siting of energy infrastructure facilities and projects and the permitting and construction of those facilities and running a business unit within the consulting firm titled the "Energy Division." My tasks were to manage, develop, and execute the energy related projects the firm had been hired to execute.

Following PBS&J, I worked at Cheniere Energy where I was the Vice President of Regulatory and Government Affairs. I was the corporate officer responsible for the day to day execution of the company's regulatory and environmental programs, compliance and project oversight and execution. Part of my responsibilities also included execution of the company's special projects and philanthropy program.

- 41 Q. Have you previously submitted or prepared testimony in this proceeding in South
- 42 Dakota?

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- 43 A. No.
- 44 Q. What is the purpose of your direct testimony?
- 45 A. I am testifying in support of Dakota Access's request for a permit pursuant to Energy
- 46 Conversion and Transmission Facility Act authorizing Dakota Access to construct, install,

operate, and maintain the South Dakota portion of the Dakota Access Pipeline, to be comprised of approximately 274.5 miles of new 30-inch outside diameter crude oil pipeline from a point near Herreid, South Dakota, and extending southeasterly for approximately 274.5 miles through the state of South Dakota to ultimately terminate at Patoka, Illinois, where the pipeline will connect with several of the existing tank farms located near Patoka, Illinois.

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My testimony will include (i) a description of the corporate organization of Dakota Access and its affiliates; and (ii) Dakota Access's request for authority to construct the Project under SDCL 49-41B and ARSD 20:10:22 which includes, without limitation the purpose of the facility, the estimated cost of the facility, demand for the facility, and to provide general information regarding the proposed site and the process we went through to select the site. In addition, I will testify regarding the potential impact this facility will have on the state and communities through which it passes.

Q. Can you provide a description of the corporate organization of Dakota Access and its affiliates?

- A. Dakota Access, LLC is a Delaware limited liability company with its principal offices at 3738 Oak Lawn Avenue, Dallas, Texas 75219. The membership interest of Dakota Access, LLC is owned 75 percent by Dakota Access Holdings, LLC and 25 percent by Phillips 66 DAPL Holdings LLC.
- Dakota Access Holdings, LLC is owned 100 percent by Energy Transfer Partners, L.P.

 ("ETP"), a master limited partnership publicly traded on the New York Stock Exchange

 ("NYSE"). Energy Transfer Equity, L.P. ("ETE"), also a master limited partnership publicly

 traded on the NYSE, indirectly owns the general partner of ETP and certain of that

 partnership's limited partner units. ETP owns the general partner of Sunoco Logistics Partners,

70 L.P. ("SXL") and certain of its limited partner units. (ETE and ETP are together referred to

71 herein as "Energy Transfer"). Energy Transfer maintains its corporate headquarters at 3738

72 Oak Lawn Avenue, Dallas, Texas 75219.

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ETP and SXL have reached an agreement in principle for the transfer to SXL of an

74 indirect 30 percent interest in Dakota Access, LLC.

Phillips 66 DAPL Holdings LLC is owned 20 percent each by Phillips 66 DE Holdings 20A LLC, Phillips 66 DE Holdings 20B LLC, Phillips 66 DE Holdings 20C LLC, Phillips 66 DE Holdings 20D LLC, and Phillips 66 DE Holdings Primary LLC. The five Phillips 66 entities are owned 100 percent by Phillips 66 Project Development Inc. Phillips 66 Project Development Inc. is 100 percent owned by Phillips 66 Company. Phillips 66 Company is 100 percent owned by Phillips 66, a Delaware corporation. Phillips 66 maintains its corporate

Q. Will the pipeline be operated by Dakota Access, LLC?

headquarters at 3010 Briarpark Drive, Houston, Texas 77042.

A. The proposed pipeline project will be owned by Dakota Access, LLC and operated by DAPL-ETCO Operations Management, LLC; and ultimately will be operated day-to-day under an operating agreement by our crude oil pipeline affiliate Sunoco Logistics. Sunoco Logistics currently operates the majority of the Energy Transfer family of assets crude oil pipelines. This arrangement has been made to take advantage of and maximize our ability to seamlessly integrate this new asset into our company umbrella to maximize the pipeline safety considerations, operational consistency and overall cost efficiency. Dakota Access will rely upon Sunoco's existing crude oil operating infrastructure such as the back-end accounting systems, control room, operating integrity programs as well as rely upon Sunoco's experience and overall policies and procedures.

Q. Please give us an overview of the proposed pipeline.

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94 A. Dakota Access, LLC (Dakota Access), is proposing to construct the Dakota Access 95 Pipeline Project (Project). DAPL-ETCO Operations Management, LLC will operate the Project. Sunoco Pipeline L. P. has been appointed as operator of the Dakota Access Pipeline on behalf of 96 DAPL-ETCO Operations Management, LLC. The overall proposed Project is a 1,172.53-mile-97 long, 12-inch to 30-inch diameter pipeline that will connect the rapidly expanding Bakken and 98 99 Three Forks production areas in North Dakota to existing crude infrastructure in Illinois. The project originates in the northwest portion of North Dakota and traverses southeast through 100 South Dakota, Iowa, and Illinois and terminates at the existing Patoka, Illinois hub. The pipeline 101 is proposed to transport approximately 450,000 barrels per day (bpd) initially, with an 102 anticipated capacity of 570,000 bpd or more. The Project's purpose is to move an economical 103 abundant reliable domestic supply of crude oil from the Bakken and Three Forks production area 104 in North Dakota to a crude oil market hub located near Patoka, Illinois. From the Patoka hub, 105 106 the crude oil will be transported by other pipelines to refineries located in the Midwest and the Gulf Coast via existing and proposed pipeline infrastructure to further the U.S. goal of energy 107 independence. Approximately 274.5 miles of the 1,172.53-mile-long pipeline will be 108 constructed within South Dakota, crossing 13 counties in the eastern half of the state. The 109 Project enters South Dakota in Campbell County approximately 17 miles east of the Missouri 110 River, and continues southeast through McPherson, Edmunds, Faulk, Spink, Beadle, Kingsbury, 111 Miner, Lake, McCook, Minnehaha, Turner, and Lincoln counties. The Project crosses the Big 112 Sjoux River approximately 14 miles south of Sjoux Falls, and continues in a southeast direction 113 through Iowa. One pump station is located within South Dakota, approximately seven miles 114 southeast of Redfield in Spink County. 115

116 Q. What is the estimated cost of the facility?

- 117 A. The cost of constructing the entire 1,172.53-mile-long pipeline beginning in North
- Dakota, going through South Dakota and Iowa, and terminating in Illinois is estimated to be
- approximately \$3.8 billion. Construction of the 274.5-miles of pipeline and facilities within
- 120 South Dakota will cost approximately \$820 million.
- 121 Q. Can you describe for us the demand for the facility?
- 122 A. Dakota Access has secured binding long-term transportation and deficiency contracts
- from multiple committed shippers to support development of the Dakota Access Pipeline with a
- crude oil transportation capacity of approximately 450,000 bpd, with ninety percent (90%) of the
- transportation capacity subscribed by those committed shippers and the remaining ten percent
- 126 (10%) of the transportation capacity reserved for walk-up shippers. Transportation service on
- the Dakota Access Pipeline shall be provided by Dakota Access pursuant to the Interstate
- 128 Commerce Act and in accordance with the rules and regulations of the Federal Energy
- Regulatory Commission for common carrier crude oil pipeline transportation service thereunder.
- Subscriptions from committed shippers were obtained by Dakota Access in connection with an
- initial open season that ran from March 12 to May 23, 2014, and an expansion open season that
- commenced on September 23, 2014, and concluded in mid-December of 2014.
- 133 Q. Where in South Dakota is the pipeline expected to be developed?
- 134 A. The Project originates in North Dakota and enters South Dakota in Campbell County
- approximately 17 miles east of the Missouri River. A summary of the Project facilities in South
- Dakota is outlined in Table 11.0-1. The Project exits South Dakota as it crosses the Big Sioux
- 137 River approximately 14 miles south of Sioux Falls, and continues in a southeast direction
- through Iowa. Approximately 274.5 miles of the 1,172.53-mile-long pipeline and one pump

station will be constructed within South Dakota. Additionally, Dakota Access will construct aboveground appurtenances including 40 mainline valves (MLVs) and three pig launcher and receiver (L/R) facilities. Contractor/staging yard (s) will also be required for the project.

Pipeline Crossing Length (miles) / Pump Station	County	142
Impact Area (acres)	Journey	143
29.17	Campbell	144
6.64	McPherson	145
36.17	Edmunds	146
27.88	Faulk	147
36.06	*Spink	148
30.35	Beadle	149
21.97	Kingsbury	150
14.26	Miner	151
18.61	Lake	152
1.72	McCook	153
26.16	Minnehaha	154
2.15	Turner	155
23.51	Lincoln	156
36.06	Spink	157

Construction of the new pipeline will require a typical construction ROW width of 125 feet in uplands, 100 feet in non-forested wetlands, 85 feet in forested areas (wetlands and uplands), and up to 150 feet in agricultural areas. Following construction, a 50-foot wide permanent easement will be retained along the pipeline.

Where necessary, Dakota Access will utilize additional temporary workspace (ATWS) outside of the construction ROW to facilitate specialized construction procedures, such as horizontal directional drills (HDDs); railroad, road, wetland, waterbody, and foreign utility line crossings; tie-ins with existing pipeline facilities; areas with steep side slopes; and pipeline crossovers. These ATWS will be allowed to revert to pre-existing conditions following construction activities, so there will be no permanent impacts on these areas.

Dakota Access will utilize existing public and private roads to access the pipeline ROW and aboveground facilities to the extent practicable. Existing roads utilized will include paved, gravel, or pasture roads, and other conveyances. Some roads will require modification or improvement to facilitate safe access for construction equipment and personnel. The Project may require construction of new temporary and permanent roads to provide access to the new pipeline both during construction and for future pipeline maintenance activities. Access roads have not been thoroughly defined during this early design phase. Dakota Access will seek and enter into road use agreements with all affected units of government.

Q. How was the site for the pipeline selected?

A. Dakota Access utilized a sophisticated and proprietary Geographic Information System (GIS) based routing program to determine the preferred pipeline route based on multiple publicly available and purchased datasets. Datasets utilized during the Project routing analysis included engineering (e.g., existing pipelines, railroads, karst, and power lines, etc.), environmental (e.g., critical habitat, fault lines, state parks, national forests, brownfields, national registry of historic places, etc.), and land (e.g., dams, airports, cemeteries, schools, mining, and military installations, etc.). Each of these datasets were weighted based on the desire to co-locate with certain features (low values) and the risk of crossing, or desire to avoid others (higher the risk,

the higher the value), while minimizing overall length of the route. The GIS program utilized the weighted datasets to produce the preferred baseline route. For example, the existing pipelines dataset was assigned the lowest value so that the routing tool followed existing pipelines to the extent possible to minimize potential impacts. An example of a high weighted feature is the national parks dataset; therefore the GIS routing program excluded any national parks from the preferred pipeline route to avoid impacts to these federal lands.

The baseline centerline route was the output of the GIS routing analysis that was completed during the fatal flaws phase of the Project, and the basis of further investigation. As the Project moved into the design phase, coordination with agencies within states crossed by the Project advanced, survey data collection commenced, landowners were engaged, and additional datasets were collected. These more focused datasets were then utilized to incorporate reroutes as needed to optimize the route.

The proposed pipeline route has been modified in multiple locations for constructability issues and various other reasons including avoidance of Well Head Protection/HCAs, U.S. Fish and Wildlife Service (USFWS) easements, environmental features such as wetlands and waterbodies, cultural resource sites, incompatible land uses (e.g., recently expanded quarries), home/farm sites, buildings, irrigation systems, power poles/towers and other structures, trees planted for windbreaks, and property corners. Route modifications were made through a process that included detailed review of recent aerial imagery, actual site visits, the existing datasets, and helicopter reconnaissance as warranted.

O. How does the project categorize route modification?

There are three basic categories of route modifications including, realignments, minor reroutes, and major reroutes.

Realignments are small changes in the pipeline route resulting in a change in centerline location of less than 150 feet. Realignments are fully within the 400-foot environmental/cultural survey corridor and do not require additional survey efforts if surveys were already complete at the time of realignment. To date, there have been a total of 92 realignments constituting a total length of 35.6 miles of route modification. Minor reroutes are changes in the pipeline route of greater than 150 feet from the original centerline and therefore require some additional environmental/cultural survey coverage if surveys were completed prior to development of the reroute. Minor reroutes are relatively short and typically do not involve new landowners. There have been a total of 37 minor reroutes with a total length of 28.0 miles. Major reroutes are more extensive route modifications over many miles and involving multiple new landowners. Major reroutes typically require additional environmental/cultural survey coverage. Presently, there has been three major reroutes with a total length of 55.1 miles. The two most recent reroutes, due to identification late in the route development process are depicted in the maps and tables, but are not incorporated into the Project MPs. The Spink County reroute is identified with an "A" before the MPs, while the Turner and Lincoln counties reroute is identified with a "B". At this point in time, all reroutes depicted in Exhibit A are considered the

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proposed route.

Q. How would you describe your assessment of the proposed route?

A. The currently proposed route most closely meets the objectives of the Project, while minimizing potential impacts to the environment and maintaining the health and safety of the public. Additional route modifications will continue through permitting and land acquisition processes to further reduce environmental impacts and reduce the need for eminent domain.

231 (). [Have you	assessed	the r	potential	impacts	of the	facility o	n the	community	?
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- 232 A. Yes. The following information identifies the effects of construction and operation of the
- 233 Project on the community, taxes, agriculture, population, transportation, and cultural resources.
- The following discussion includes potential impacts on commercial and industrial sectors,
- 235 housing, land values, labor market, health facilities, energy, sewage and water, solid waste
- 236 management facilities, fire protection, law enforcement, recreational facilities, schools,
- 237 transportation facilities, and other community and government facilities or services.

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Q. What are the expected impacts to the commercial and industrial sectors?

- A. The local economies are anticipated to benefit from temporary hiring of local employees and from the influx of non-local construction workers. The South Dakota portion of the Project area is anticipated to cost \$820 million, approximately \$486 million of this total (59 percent) will result in direct spending in the South Dakota economy. Economic benefits to local commercial businesses are anticipated to increase through the sales of food, lodging, services, and goods that will be generated by the temporary non-local work force. Dakota Access will purchase goods, including construction materials and other supplies for the Project from local businesses. Local purchases for construction will include consumables, fuel, equipment maintenance, equipment rental, space leasing, miscellaneous construction-related materials such as office supplies, and some medical/dental needs. The direct spending within the state will cause indirect and induced spending of \$168 million and \$186 million. The total impact on the South Dakota economy will be \$836 million increase in production and sales.
- The Project will not result in operation impacts to the commercial sector. Construction and operation impacts to the industrial sector are not anticipated.

Q. What is the expected impact to the housing market?

A. It is expected that most non-local Project workers will use temporary housing, such as rental units, hotels, motels, campgrounds, and recreational vehicle parks. In the South Dakota counties that the pipeline corridor crosses, there are approximately 2,500 available rental units, 4,700 motel rooms, and 1,900 campground/recreational vehicle spaces. These accommodations are all within approximately 10 to 40 miles of the pipeline corridor. During the construction months between February and August 2016, it is estimated that up to approximately 1,448 pipeline construction personnel will be in South Dakota. It is anticipated that most of the temporary workers will seek housing in the more populated, service-oriented towns located within a reasonable commuting distance to the work site.

O. Will Dakota Access use local labor?

communities.

A. It is anticipated that 10-12 permanent employees will be hired in South Dakota. Approximately 724 construction personnel (Dakota Access employees, contractor employees, construction inspection staff, and environmental inspection staff) are anticipated to be associated with each construction spread. The current construction plan involves two large construction spreads in 2016 in South Dakota, for a total of 1,448 construction personnel. Project construction will result in more than 7,100 additional job-years of employment with an approximate \$303 million increase in labor income. Dakota Access expects that its construction contractors will hire temporary construction personnel from the local communities where possible. It is estimated that up to 50 percent of the total construction work force could be hired locally, with the remaining portion consisting of non-local personnel.

The net economic effect on local communities should be positive for the duration of the construction period. Construction of the Project will result in short-term benefits to the local

277 Q. What do you anticipate the impacts will be to health facilities?

A. Local healthcare facilities will provide healthcare services to Dakota Access workers

during the construction and operation phases of the Project. Dakota Access' health and safety

policies and procedures should limit the utilization of local health facilities during the temporary

influx of non-local construction workers during Project construction. Due to the limited number

of permanent employees required for operations, no effect on health services and facilities are

anticipated during operation of the Project.

Q. What will be the impact on local energy facilities?

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A. Existing (hotels, offices, etc.) and portable facilities (along the ROW) and the local communities should not see any impact on their public utilities as a result of the Project. No significant effects from operation of the Project are anticipated.

288 Q. What will be the impact on local sewage and water facilities?

A. Construction of the Project will generate non-hazardous pipeline construction wastes including human waste, trash, pipe banding and spacers, waste from coating products, welding rods, timber skids, cleared vegetation, stumps, rock and all other miscellaneous construction debris. All waste, which contains (or at any time contained) oil, grease, solvents, or other petroleum products will be segregated for handling and disposed of in accordance with federal and state regulations.

O. Does the project anticipate impacts to solid waste management facilities?

A. All trash will be removed from the construction ROW on a daily basis unless otherwise approved or directed by Dakota Access. Minor vegetation, rock and other natural debris will be removed from the construction ROW by the completion of clean-up. All trash and wastes will be removed from every construction area when work is completed at each location. All waste

300 materials will be disposed at licensed waste disposal facilities. 301 All drill cuttings and drilling mud will be disposed at an approved location. Disposal options may include spreading over the construction ROW in an upland location approved by Dakota 302 Access, hauling to an approved licensed landfill, or other site approved by Dakota Access and in 303 accordance with applicable regulations. Human wastes will be handled and disposed of 304 exclusively by means of portable self-contained toilets during all construction operations. 305 Wastes from these units shall be collected by a licensed contractor for disposal only at licensed 306 and approved facilities. 307 Due to the above reasons, significant impacts to solid waste management during construction are 308 not anticipated. In addition, solid waste operational impacts associated with this Project are not 309 anticipated. 310 What are the expected impacts from construction and operation to fire protection 311 O. and law enforcement? 312 A. Law enforcement agencies in the communities adjacent to the Project should not 313 experience a significant impact from the pipeline workers. All employees and contractors must 314 abide by all federal, state and local laws. If any infractions occur, the employees or contractors 315 will be subject to termination. 316 Dakota Access will work with the local law enforcement, fire departments, and emergency 317 medical services to coordinate effective emergency response. 318 Dakota Access will utilize employees and contractors as emergency responders within its initial 319 response efforts in the event of a pipeline spill. Dakota Access will be consistent with industry 320 practice and in compliance with applicable regulations relating to spill personnel. In the unlikely 321 event of a spill, the usual role of local emergency responders is to notify community members, 322

direct people away from the hazard area, and address potential impacts to the community such as temporary road closings. Local emergency responders typically are trained and capable to execute the roles described above without any additional training or specialized equipment. Dakota Access will proactively work with emergency response agencies to provide pipeline awareness education and other support. Dakota Access will implement a comprehensive public awareness program, consistent with all company pipelines in the U.S. This program will commence in advance of the Project in-service date (estimated as October 2016). The purpose of the public awareness program is to inform key members of the public of the location of Dakota Access facilities and activities to protect the public from injury, what to do if an emergency occurred, protect or minimize effects on the environment, protect Dakota Access facilities from damage by the public, and provide an opportunity for on-going public awareness. Dakota Access' public awareness program follows National Preparedness for Response Exercise Program Guidelines developed by the U.S. Coast Guard and adopted by the Pipeline and Hazardous Materials Safety Administration (PHMSA), the Bureau of Ocean Energy Management, Regulation and Enforcement, and the EPA. Participation in this program ensures that Dakota Access meets all federal requirements mandated by Oil Pollution Act of 1990. Q. What will be the expected impacts to recreation from construction and operation? South Dakota has extensive recreational opportunities including fishing, boating, hunting, A. hiking, camping, biking, and bird watching. The most heavily used areas will most likely occur where public access exists. The Project does not cross any federal or state owned wildlife lands; however, construction of the Project may temporarily limit access to certain private areas used for recreation. Construction of the Project may limit access to these walk-in areas and private lands. In addition, hunting opportunities may be interrupted within the vicinity of construction

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346 activities; however, possible access and hunting opportunity impacts will be temporary. No 347 impacts associated with the operation of the Project are anticipated. Hunting is compatible with 348 normal operation of the pipeline. 349 No impacts or limited access to any fishing or boating areas are anticipated as result of construction or operation of the Project. In the unlikely event an impact should occur, it will be 350 short-term and infrequent, therefore impacts to fishing and boating is not anticipated. 351 Please describe for us the expected effect on transportation in the areas of 352 Q. construction and operation? 353 Transportation routes to be utilized during construction will be established through A. 354 consultation with state and local highway agencies as necessary. Those contacts will begin soon 355 and continue through construction. Dakota Access expects to enter into road use agreements 356 with all affected state and local highway agencies. 357 Dakota Access will seek to have the Commission set a road bond in accordance with SDCL 49-358 359 41B-38. The Department of Commerce and Regulation, Division of Highway Patrol has jurisdiction over 360 the federal and state highway system in South Dakota, and is responsible for issuing 361 transportation-related permits to accommodate construction vehicles and traffic. Dakota Access 362 has initiated contacts with local permitting authorities for the purpose of establishing timelines 363 364 for road permit approvals. During construction, traffic on highways and secondary roads will be increased due to the 365 construction activities and due to the influx of construction workers. Hauling of line pipe and 366 most construction equipment will be within state road and bridge weight limits. There will be 367 isolated hauling of equipment that will require special permits for weight and/or width. There 368

may be an increased temporary demand for permits for vehicle load and width limits. The 369 primary impact will be deterioration of gravel or stone surfaced roads requiring grading and/or 370 replenishment of the surface materials. Dakota Access expects to be responsible for repairing 371 damage to roads and restoring them to pre-construction condition or as agreements with the 372 affected agencies dictate. 373 374 Q. Please describe for us your expectations in terms of taxes due the state and local 375 governments? SDCL Chapters 10-13 requires that the Department of Revenue annually determine the 376 A. assessed value of the pipeline for ad valorem property tax purposes. Assessed value must be 377 determined using the cost, market, and income approaches to appraisal per SDCL Chapter 10-37-378 9.1. 379 The increased economic activity that results during construction of the pipeline will generate 380 381 additional sales, use, gross receipts, and lodging taxes of approximately \$36 million for state government, plus \$3 million for local governments. Once the pipeline goes into operation South 382 Dakota State and local governments will realize ongoing annual sales, use, and gross receipts of 383 about \$197,000. Also, during the first full year of operation the pipeline will generate an 384 385 estimated \$14 million in new property taxes for local governments. Q. Can you describe for us the forecast of the pipeline's impacts on agricultural? 386 Impacts to pastureland and rangeland areas will result from temporarily clearing 387 A. vegetation in the ROW. These areas are anticipated to recover in one to three growing seasons 388 after construction is complete. Long-term or permanent impacts are not anticipated, except at 389 aboveground facility locations that will be fenced in and removed from current use. 390

Rangeland may be affected during construction by restrictions on livestock movement across

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construction areas. Once construction is complete and the ROW has been restored, grazing and 392 livestock movement over the permanent ROW may resume. Landowners will be compensated 393 for the temporary loss of land use. Grazing practices should return to normal after vegetation is 394 395 re-established, therefore permanent impacts are not anticipated. Access to and work on pastureland and rangeland will be in accordance with all easement 396 397 agreements and applicable permits and regulations. Permanent impacts on agricultural production are not anticipated since the pipeline will be 398 399 buried deep enough to allow continued use of the land. Agricultural production across the 400 permanent ROW will be allowed to resume following final clean-up of pipeline construction. 401 Dakota Access will restore all lands equivalent to adjacent off-ROW lands and will provide compensation for crop loss, diminished productivity, and other damages to farmland. 402 Reclamation and revegetation of croplands impacted by Project construction will be in 403 accordance with applicable easement agreements. Land will be recontoured to pre-existing 404 conditions as practical and disturbed structures, ditches, bridges, culverts, fences, and slopes will 405 be restored. Measures within the AIMP (Exhibit D) will be implemented to minimize potential 406 impacts to agricultural areas. 407 Access to and work on croplands will be in accordance with all applicable permits and 408 409 regulations. Q. Please describe your forecast of the impacts on South Dakota's population? 410 411 Approximately 1,448 construction personnel at peak construction are anticipated for the Α. pipeline construction spreads in South Dakota. The Project construction period will be relatively 412 short in any given area and most non-local workers will not be accompanied by their families 413 during their employment, therefore should not have impact on local population.

415	During construction of the Project, there is likely to be a positive impact on income with an			
416	estimated \$303 million increase in labor income. Once the pipeline has been built, the yearly			
417	operations and maintenance spending will add 12 permanent jobs, approximately \$2 million in			
418	labor income, and approximately \$4 million in additional production and sales to the South			
419	Dakota economy.			
420	During operations, the small number of potential permanent jobs suggests that the Project will			
421	not have long-term impact on income, occupational distribution, or cohesion of the local			
422	communities.			
423	Q. Please describe your thoughts on pipeline decommissioning.			
424	A. Sections 20:10:22:33.01 and 20:10:22:33.02 are not applicable to this Project application.			
425	However, if/when decommissioning is necessary it will be done pursuant to applicable federal			
426	and state laws at the time of decommissioning.			
427	Q. Does this conclude your testimony?			
428	A. Yes.			
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430	Dated this day of July, 2015			
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433	Joey Mahmoud			